

ELEVATOR SAFETY BOARD
BUREAU OF CONSTRUCTION CODES
Conference Room 3
2501 Woodlake Circle
Okemos, Michigan

A G E N D A
Friday, November 7, 2008 - 9:30 A.M.

1. Call to Order and Determination of Quorum

Approval of Minutes – August 22, 2008 (Part 1, Pages 2-5)
2. Review of Elevator Contractor Applications:

Stark, Steven S., Class A – Re-exam (Part 1, Pages 6-9)
3. Review of Elevator Certificate of Competency Applications:

Mann, Keith A., Re-exam (Part 1, Pages 10-14)
4. Waiver Requests
 - a. McNally Elevator Co. Veneklas Residence, Grand Rapids (Part 1, Pages 15-20)
 - b. Advanced Technology & Testing, ATW, Livonia (Part 1, Pages 21-23)
 - c. HFHS Wireless Program Manager, West Bloomfield Hospital (Part 1, Pages 24-34)
 - d. Adaptive Environments, Sunnybrook Lanes, Sterling Heights (Part 1, Pages 35-43)
 - e. ThyssenKrupp Elevator, Installation Permits, Bloomfield Park Bldg D, Bloomfield Hills
(Part 1, Pages 44-57)
 - f. ThyssenKrupp Elevator, New Synergy Product Line, (Part 2, Pages 1-43)
5. Department Report:
 - a. Chief's Report
 - b. MRL Report
 - c. Accident Report
6. Legislative Update
7. Old Business:
 - a. Hillclimbers Committee Report
 - b. Elevator Technology, rope gripper requirements
8. New Business
 - a. Proposed 2009 Board and Examination Schedule (Part 2, Page 44)
9. Public Comment
10. Adjournment

The meeting site and parking are accessible. Individuals attending the meeting are requested to refrain from using heavily scented personal care products, in order to enhance accessibility for everyone. People with disabilities requiring additional services (such as materials in alternative format) in order to participate in the meeting should call Laurie Bass at (517) 241-9337 at least 10 work days before the event. DLEG is an equal opportunity employer/program.



JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LABOR & ECONOMIC GROWTH
LANSING

KEITH W. COOLEY
DIRECTOR

ELEVATOR SAFETY BOARD
DEPARTMENT OF LABOR & ECONOMIC GROWTH
BUREAU OF CONSTRUCTION CODES

Conference Room 3
2501 Woodlake Circle
Okemos, Michigan 48864

MINUTES

Friday, August 22, 2008
9:30 A.M.

MEMBERS PRESENT

Mr. Joseph McNally, Chair
Mr. Richard A. Egerer
Mr. David Flint
Ms. Erin McLogan (Modiano)
Mr. Pat Carroll
Mr. William Kogelschatz
Mr. Steven C. Lindsay
Mr. Antwane Maddox
Mr. George Svinicki
Mr. Eric Thomas

MEMBERS ABSENT

MICHIGAN DEPARTMENT OF LABOR AND ECONOMIC GROWTH PERSONNEL
ATTENDING

Ms. Beth Aben, Deputy Director, Bureau of Construction Codes
Mr. Calvin Rogler, Chief, Elevator Safety Division
Ms. Laurie Bass, Elevator Safety Division
Ms. Ashleigh Ramey, Elevator Safety Division

OTHERS IN ATTENDANCE

Mr. David Sullivan
Mr. Ken Litteral, Otis Elevator
Mr. Adam Rogalla, Saint Mary's Health Care
Mr. Paul Payne, Otis Elevator
Mr. Matt Scheinost, Otis Elevator

Mr. Chris Macklin, CMD
Mr. Bruce Lardner, 2nd Step
Mr. James Howard, 2nd Step

Providing for Michigan's Safety in the Built Environment

BUREAU OF CONSTRUCTION CODES
P.O. BOX 30254 • LANSING, MICHIGAN 48909
Telephone (517) 241-9337 • Fax (517) 241-6301
www.michigan.gov/dleg

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Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities

1. **CALL TO ORDER AND DETERMINATION OF QUORUM**

The meeting was called to order at approximately 9:30 a.m. by Chairperson McNally. A quorum was determined present at that time.

2. **APPROVAL OF MINUTES**

A **MOTION** was made Richard Egerer and supported by David Flint to approve the minutes of the June 6, 2008 board meeting. **MOTION CARRIED**

3. **WAIVER REQUESTS**

a. **Elevator Technology, Inc. Severstal North America, Dearborn, Michigan**

Request has been made by Elevator Technology, Inc., for a waiver to ASME A17.1 section 2.19, Ascending Car Overspeed and Unintended Car Movement Protection. Elevator Technology Inc. is asking for a waiver to the rope gripper requirements for State serial #18946 located at Severstal North America in Dearborn, Michigan.

After discussion, a **MOTION** was made by David Flint and supported by Richard Egerer to table this variance request until a representative from Elevator Technology can be present.

Elevator Technology is asked to provide the specific code section they are seeking a waiver for. **MOTION CARRIED**

b. **Otis Elevator Co., Saint Mary's Health Care, Grand Rapids, Michigan**

Request has been made by Otis Elevator for a variance ASME 17.1, 2004 Section 8.11.2.3.5, regarding Standby Power testing, at St. Mary's Health Care in Grand Rapids, Michigan

After discussion, a **MOTION** was made by David Flint and supported by William Kogelschatz to approve this variance request with the following requirements:

1. The entire building load must be on the generators during the test.
2. Test one elevator at a time with 125% of the rated load in the down direction

1 abstention- George Svinicki

MOTION CARRIED

- c. 2nd Step Inc., Walrich Residence, South Lyon, Michigan

Request has been made by 2nd Step Inc. for a variance to ASME A17.1-2004, R 5.3.1.10.1 to allow a platform size of 18 ft squared, at the Walrich Residence in South Lyon, Michigan.

After discussion, a **MOTION** was made by David Flint and supported by Pat Carroll to approve this variance request with the following requirements:

1. Provide a letter verifying compliance with A17.1 Section 5.
2. Provide flush fitting doors.
3. Supply an accordion style gate.
4. All A17.1 ASME requirements for residential installations shall apply.

MOTION CARRIED

4. DEPARTMENT REPORT

- o Chief's Report - Mr. Rogler distributed and discussed the Chief's Report.
- o Chief Rogler reported no MRL Elevator permits have been issued on the boards behalf since the last board meeting.
- o Accident Report - Accident reports received and input from June 1, 2008 through July 31, 2008 were distributed and discussed.

5. LEGISLATIVE UPDATE

Beth Aben reported that interviews have been completed for the Bureau's Directors Office, and she anticipates the decision to be made and announced within the next few weeks.

6. OLD BUSINESS

Request has been made by David Sullivan for a waiver to R 408.7021 of the Michigan Elevator Rules regarding revocation of a Contractor's license if not renewed within 60 days of expiration date.

After discussion, a **MOTION** was made by Richard Egerer and supported by George Svinicki to reinstate Mr. Sullivan's Elevator Contractors license.

7. NEW BUSINESS

none

8. PUBLIC COMMENT

none

August 22, 2008

9. **ADJOURNMENT**

A **MOTION** was made by George Svinicki and supported by Pat Carroll to adjourn.
MOTION CARRIED

Chairperson McNally adjourned the meeting at approximately 10:40am.

Approved: _____ Date: _____
Joseph McNally, Chairperson

Application for Elevator Contractor License Examination

183

Michigan Department of Labor & Economic Growth
Bureau of Construction Codes
Elevator Safety Division
P.O. Box 30255, Lansing, MI 48909
517-241-9337
www.michigan.gov/bcc

OFFICE USE ONLY

DIVISION ACTION	DATE
<input type="checkbox"/> SUBMITTED TO BOARD	INITIALS
<input type="checkbox"/> REJECTED	DATE
BOARD ACTION	
<input type="checkbox"/> APPROVED	
<input type="checkbox"/> REJECTED	

EXAMINATION FEE: \$100.00 (nonrefundable)

Authority: 1987 PA 227 Completion: Mandatory As Required By Section 12 Penalty: Examination Will Not Be Given	DLEG is an equal opportunity employer/program. Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.
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IMPORTANT - READ CAREFULLY

- This application must be on file in the office of the Elevator Safety Division, Department of Labor & Economic Growth, Bureau of Construction Codes, P.O. Box 30255, Lansing, Michigan, 48909, on or before the twentieth day proceeding the date of the examination.
- The applicant shall be in a position to submit sufficient information relative to his/her experience, integrity and responsibility.
- Applicant must have at least 5 years of experience as an elevator constructor or journey person in the type of elevator work for which they desire the license.
- Submit 2 written references.
- Examination applications not properly completed will be rejected.
- The examination fee must accompany this application. Make check or money order payable to the State of Michigan.
- Mail completed examination application and fee to above address.

HAVE YOU PREVIOUSLY APPLIED TO TAKE THIS EXAMINATION? ☐ No ☒ Yes

APPLICANT INFORMATION

CLASS		
<input checked="" type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C - Device Type <u>CONTRACTORS</u>
NAME		SOCIAL SECURITY NUMBER
<u>STEVEN SCOTT STARK</u>		
ADDRESS		TELEPHONE NUMBER (Include Area Code)
<u>27571 WYLY</u>		
CITY	STATE	ZIP CODE
<u>CHESTERFIELD</u>	<u>MI.</u>	<u>48017</u>

COMPANY REPRESENTING

COMPANY NAME		
<u>DETROIT ELEVATOR CO.</u>		
ADDRESS		BUSINESS TELEPHONE NUMBER (Include Area Code)
<u>2121 BURGESS</u>		<u>248-591-7484</u>
CITY	STATE	ZIP CODE
<u>FERDIALE</u>	<u>MI.</u>	<u>48230</u>

REFERENCES - Enter below the names and addresses of three references and submit not less than two (2) written references with this application from those listed certifying your years of experience as an elevator constructor, journey person or equivalent.

NAME			NAME		
<u>Daniel Doyle</u>			<u>David Nowicki</u>		
ADDRESS			ADDRESS		
<u>42310 June Dr.</u>			<u>3095 Cairncross</u>		
CITY	STATE	ZIP CODE	CITY	STATE	ZIP CODE
<u>Sterling Hts</u>	<u>MI</u>	<u>48314</u>	<u>Oakland</u>	<u>Mich</u>	<u>48363</u>
NAME			NAME		
<u>JOE VAUGHAN</u>					
ADDRESS			ADDRESS		
<u>816 E. BARRETT</u>					
CITY	STATE	ZIP CODE	CITY	STATE	ZIP CODE
<u>MADISON Hts</u>	<u>MI</u>	<u>48071</u>			

*This information is confidential. Disclosure of confidential information is protected by the Federal Privacy Act.

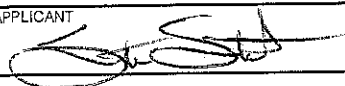
EMPLOYMENT HISTORY - Start with present or last employer and list in reverse order. (Attach additional sheets if necessary)

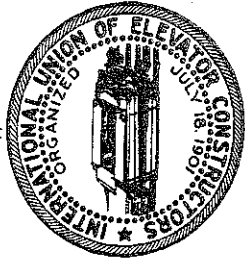
State definitively your qualifying installation and servicing experience on equipment, similar to that for which license is required. Give names and addresses of firms with whom employed, duties, length of service and dates of employment. Present available documentary evidence to substantiate experience.

NAME OF PRESENT OR LAST EMPLOYER DETROIT ELEVATOR CO.			DATES EMPLOYED (Month / Day / Year) FROM: 5-10-93 TO: Present	
ADDRESS 2121 BURDETTE	CITY FERNDALE	STATE MI.		
YOUR JOB TITLE (Apprentice, Journeyperson, Foreman, Adjuster, etc.) APPRENTICE / JOURNEYPERSON / FOREMAN		YOUR SUPERVISOR'S NAME AND TITLE DON PURDIE SR.		
JOB DUTIES (New Elevator Construction, Maintenance, Service, Repair, Adjuster, etc.) NEW CONSTRUCTION / REPAIR / ADJUSTER / CONSTRUCTION SUPERVISOR				
TYPE OF EQUIPMENT WORKED ON (Traction (geared, gearless), Hydraulic (direct, roped), Stage Lift, Sidewalk, Escalators, etc.) TRACTION GEARED / GEARLESS - HYDRAULIC, DIRECT ROPED, SIDEWALK LIFTS, STAGE LIFTS MANUFACTURED IN SHOP, ELEVATORS, & EQUIPMENT.				
NAME OF PREVIOUS EMPLOYER DOVER ELEVATOR CO.			DATES EMPLOYED (Month / Day / Year) FROM: 7-22-92 TO: 5-10-93	
ADDRESS CLOVERDALE	CITY CAY PARK	STATE MI.		
YOUR JOB TITLE (Apprentice, Journeyperson, Foreman, Adjuster, etc.) APPRENTICE		YOUR SUPERVISOR'S NAME AND TITLE ROY GODDELL		
JOB DUTIES (New Elevator Construction, Maintenance, Service, Repair, Adjuster, etc.) CONSTRUCTION HELPER				
TYPE OF EQUIPMENT WORKED ON (Traction (geared, gearless), Hydraulic (direct, roped), Stage Lift, Sidewalk, Escalators, etc.)				
NAME OF PREVIOUS EMPLOYER DETROIT ELEVATOR CO.			DATES EMPLOYED (Month / Day / Year) FROM: 11-06-85 TO: 12-18-90	
ADDRESS 2121 BURDETTE	CITY FERNDALE	STATE MI.		
YOUR JOB TITLE (Apprentice, Journeyperson, Foreman, Adjuster, etc.) SHOP FABRICATION		YOUR SUPERVISOR'S NAME AND TITLE DON PURDIE SR.		
JOB DUTIES (New Elevator Construction, Maintenance, Service, Repair, Adjuster, etc.) FABRICATE ELEVATORS INHOUSE				
TYPE OF EQUIPMENT WORKED ON (Traction (geared, gearless), Hydraulic (direct, roped), Stage Lift, Sidewalk, Escalators, etc.) TRACTION, HYDROS, CABS, CARSLINGS, PLATFORMS, ETC.				

If you have a disability and require an accommodation to take the examination, please submit written documentation from a professional (education professional, doctor, psychologist, psychiatrist) to certify that your disabling condition requires the requested test accommodation. Forms are available from this office.

CERTIFICATION AND SIGNATURE

I certify all statements are true to the best of my knowledge and that all work shall be done according to the State of Michigan elevator law, rules and regulations adopted by the Elevator Safety Board.	
I also certify I am actively employed by the company I'm representing and that in the event of my leaving said firm, agree to immediately notify the Michigan Department of Labor and Economic Growth, Bureau of Construction Codes.	
SIGNATURE OF APPLICANT 	DATE 10-16-08



LOCAL UNION NUMBER THIRTY-SIX OF THE
International Union of Elevator Constructors

Phone 961-0717

P.O. Box 32451

1640 Porter Street

Detroit, Michigan 48216



October 8, 2008

Michigan Department of Labor
And Economic Growth
Bureau of Construction Codes
PO Box 30254
Lansing, MI. 48909

To Whom It May Concern:

This letter is to attest the start date in the Elevator Industry of
Steven Stark, social security number
being 09-27-1989.

Please be further advised that he has experience in construction, installation,
maintaining and servicing elevator equipment.

Hoping this information is both useful and complete, we are:

Sincerely,

Richard A. Egerer
Business Manager / Financial Secretary

David Kuras
Business Representative

RAE/bs

DETROIT



ELEVATOR COMPANY

October 13, 2008

Michigan Department of Labor and Economic Growth
Bureau of Construction Codes
Elevator Safety Division
P.O. Box 30255
Lansing, Michigan 48909

Attention: Mr. Calvin Rogler; Chief Elevator Inspector

Re: Contractors License Application

Dear Mr. Rogler,

Please accept this transmittal as a letter of reference for Mr. Steve Stark's application to pursue a Class 'A' Elevator Contractors License.

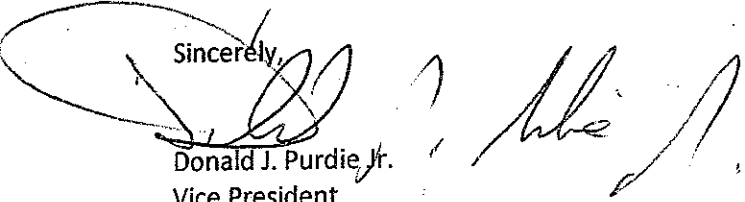
Mr. Stark has been in the almost continuous employ of Detroit Elevator Company since 1985, and has held the positions of shop fabrication, field apprentice, journeyman, and has most recently served as our construction manager since January 2001.

During this time, and in all of his various responsibilities with the company, Mr. Stark has shown a superior degree of both technical and working knowledge concerning all types of elevating devices, and most importantly has always demonstrated that public safety is his first concern.

Accordingly, I can recommend Mr. Stark without any reservation to both yourself and the Elevator Safety Board.

If you should have any questions, please do not hesitate to contact me.

Sincerely,


Donald J. Purdie, Jr.
Vice President

Application for Elevator Certificate of Competency Examination
Michigan Department of Labor & Economic Growth
Bureau of Construction Codes

183

Elevator Safety Division
P.O. Box 30255
Lansing, MI 48909
517-241-9337
www.michigan.gov/bcc

OFFICE USE ONLY

DIVISION ACTION	DATE
<input type="checkbox"/> SUBMITTED TO BOARD	INITIALS
<input type="checkbox"/> REJECTED	DATE
BOARD ACTION	
<input type="checkbox"/> APPROVED	
<input type="checkbox"/> REJECTED	

EXAMINATION FEE: \$50.00 (nonrefundable)

Authority: 1967 PA 227	DLEG is an equal opportunity employer/program. Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.
Completion: Mandatory As Required By Section 12	
Penalty: Examination Will Not Be Given	

IMPORTANT - READ CAREFULLY

- This application must be on file in the office of the Elevator Safety Division, Department of Labor & Economic Growth, Bureau of Construction Codes, P.O. Box 30255, Lansing, Michigan, 48909, on or before the twentieth day proceeding the date of the examination.
- Examinations will be held at location and on dates designated by the Elevator Safety Board in accordance with 1967 PA 227.
- General inspector applicants must have 3 years of experience in elevator construction. Special inspector applicants must have 3 years of experience in designing, installing, maintaining or inspecting elevators.
- Applicant shall record his/her formal education and names of his/her previous employers, date of employment and type of work performed.
- Provide a written reference from one or more previous employers certifying the applicant's character and experience.
- Examination applications not properly completed will be rejected.
- The examination fee must accompany this application. Make check or money order payable to the **State of Michigan**.
- Mail completed examination application and fee to above address.

HAVE YOU PREVIOUSLY APPLIED TO TAKE THIS EXAMINATION?

☐ No

☒ Yes

Tran Info: 183 14348205-1 10/15/08

CHW: 45985126394 Amt: \$15.00

ID: KEITH MANN

APPLICANT INFORMATION

TYPE			
<input checked="" type="checkbox"/> General		<input type="checkbox"/> Special	
NAME		ADDRESS	
Keith Alan MANN		1081 19 mile NE	
CITY		STATE	ZIP CODE
Cedar Springs		Michigan	49319
Do you currently hold an elevator contractor license?		Class	License No.
<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		<input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C	2200461
Do you currently hold an elevator journeyman license?		Class	License No.
<input type="checkbox"/> No <input type="checkbox"/> Yes		<input checked="" type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C	

EDUCATION AND TRAINING

CHECK THE HIGHEST GRADE COMPLETED	
<input type="checkbox"/> 6 or Less <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input checked="" type="checkbox"/> 12	
DID YOU GRADUATE?	IF YOU HAVE NOT COMPLETED HIGH SCHOOL, HAVE YOU TAKEN THE G.E.D. TEST TO EARN HIGH SCHOOL EQUIVALENCY?
<input checked="" type="checkbox"/> Yes, Year 1979 <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
HIGH SCHOOL	
Cedar Springs Public	
COLLEGE OR UNIVERSITY (ATTENDED OR ATTENDING)	
SPECIAL TRAINING	

Tran Info: 183 14348205-1 10/15/08

CHW: 08000104306 Amt: \$15.00

ID: KEITH MANN

*This information is confidential. Disclosure of confidential information is protected by the Federal Privacy Act

EMPLOYMENT HISTORY - Start with present or last employer and list in reverse order. (Attach additional sheets if necessary)

State definitively your qualifying installation and servicing experience on equipment, similar to that for which license is required. Give names and addresses of firms with whom employed, duties, length of service and dates of employment. Present available documentary evidence to substantiate experience.

NAME OF PRESENT OR LAST EMPLOYER <i>OHS Elevator</i>			DATES EMPLOYED (Month / Day / Year)	
ADDRESS <i>3765 Broadmoor SE</i>			FROM: <i>5-83</i>	TO: <i>7-87</i>
CITY <i>Kentwood</i>		STATE <i>Mich</i>		
YOUR JOB TITLE (Apprentice, Journeyman, Foreman, Adjuster, etc.) <i>Journeyman</i>		YOUR SUPERVISOR'S NAME AND TITLE <i>Tom Bruggner</i>		
JOB DUTIES (New Elevator Construction, Maintenance, Service, Repair, Adjuster, etc.) <i>New Elevator Const Maintenance Main Service Repair</i>				
TYPE OF EQUIPMENT WORKED ON (Traction (geared, gearless), Hydraulic (direct, roped), Stage Lift, Sidewalk, Escalators, etc.) <i>Hydraulic, Roped Hydraulic, Traction, geared, gearless Sidewalk Lifts Escalators, Freight Passengers</i>				
NAME OF PREVIOUS EMPLOYER <i>Grant Lakes Elevator</i>			DATES EMPLOYED (Month / Day / Year)	
ADDRESS <i>17640 Hoskins Ave</i>			FROM: <i>5-83</i>	TO: <i>5-83</i>
CITY <i>Cedar Springs</i>		STATE <i>Mich</i>		
YOUR JOB TITLE (Apprentice, Journeyman, Foreman, Adjuster, etc.) <i>Apprentice / Journeyman</i>		YOUR SUPERVISOR'S NAME AND TITLE <i>Joe Nuffesse</i>		
JOB DUTIES (New Elevator Construction, Maintenance, Service, Repair, Adjuster, etc.) <i>Maintenance, Service New Construction</i>				
TYPE OF EQUIPMENT WORKED ON (Traction (geared, gearless), Hydraulic (direct, roped), Stage Lift, Sidewalk, Escalators, etc.) <i>Traction Hydraulic Geared Gearless Underhook</i>				
NAME OF PREVIOUS EMPLOYER			DATES EMPLOYED (Month / Day / Year)	
ADDRESS			FROM:	TO:
CITY		STATE		
YOUR JOB TITLE (Apprentice, Journeyman, Foreman, Adjuster, etc.)		YOUR SUPERVISOR'S NAME AND TITLE		
JOB DUTIES (New Elevator Construction, Maintenance, Service, Repair, Adjuster, etc.)				
TYPE OF EQUIPMENT WORKED ON (Traction (geared, gearless), Hydraulic (direct, roped), Stage Lift, Sidewalk, Escalators, etc.)				

If you have a disability and require an accommodation to take the examination, please submit written documentation from a professional (education professional, doctor, psychologist, psychiatrist) to certify that your disabling condition requires the requested test accommodation. Forms are available from this office.

CERTIFICATION AND SIGNATURE

I certify all statements are true to the best of my knowledge.	
SIGNATURE OF APPLICANT <i>[Signature]</i>	DATE <i>7-19-87</i>

October 11, 2007

To Whom It May Concern:

Re: Keith Mann

I have known Keith for approximately 13 years. He began his career in the elevator industry in 1983 with a small elevator company. He made the transition to Otis Elevator Company in 1989. In his early years with Otis he worked in both the service department and the construction department. In approximately 1993, he became a route mechanic. At that time I was the maintenance supervisor in Grand Rapids and Keith reported to me.

I found him to be a good hard worker. He willingly took on any job assignment given to him. His expertise on various elevator models increased with each year he managed his route. The number of units steadily grew on his route and Keith managed to keep up with the ever increasing workload.

Allowing Keith to take the competency test would be recommended by me. At this point in his career, he is ready to add to his list of experiences.

Sincerely,



Eugene Bruggner
Retired OTIS Elevator Supervisor
1938 Betty Lou Court
Wentzville, MO 63385

10-8-07

I'm writing on behalf of Keith Mann.
With his 20 plus years of experience
as a maintenance man he is a great
candidate to become a state inspector.
He is reliable, pays attention to
detail, + fair.

Sincerely
Mike Mann
057 350

Richard Mann mechanic of Central
Elevator State number 57370

I recommend Keith Mann to sit
for the state competency test.
I think he would make a great
State inspector, with his 25 plus
years of experience working on
elevators. Keith is very diversified
in the elevator field. Works well
with others, and has a good
work ethic. Most important is
Keith's caring side for other
people. Really I can't say
enough good about him.

Sincerely

Richard
Mann



JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LABOR & ECONOMIC GROWTH
LANSING

KEITH W. COOLEY
DIRECTOR

October 21, 2008

To: Elevator Safety Board

From: C. W. Rogler

Subject: Request for recertification and reclassification of Sealed out of Service Elevator.

Request has been made by McNally Elevator to reclassify and recertify state serial #6292 located at the Veneklase Residence in Grand Rapids, Michigan.

Division Recommendation

The Elevator Safety Division recommends this variance be denied due to safety concerns.

Providing for Michigan's Safety in the Built Environment

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S# 6292



JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LABOR & ECONOMIC GROWTH
LANSING

KEITH W. COOLEY
DIRECTOR

February 11, 2008

Mr. Brad Gruizinga, President
Union Square Development, Inc.
940 Monroe Ave. NW Suite 155
Grand Rapids, MI 49503

SUBJECT: Request for recommissioning and reclassification of Sealed out of Service Elevator

Dear Mr. Gruizinga,

The Elevator Safety Division conducted an on-site review of the electric traction elevator, state serial #6292, located at 600 Broadway N.W., Grand Rapids, MI. This elevator was previously sealed out of service on September 28, 2006. During our review it was stated that the condominium owner would like the elevator reclassified as a "Private Residence Elevator".

After an on-site review of the elevator, extensive code research, and taking into consideration the conditions and circumstances which are present at this location, the Elevator Safety Division has decided not to permit this elevator to be placed back into service as either a "Passenger" or a "Private Residence Elevator". The current code requirements for a "Private Residence Elevator" would not permit this device to be reclassified, recommissioned, and placed into service. This denial has been deliberated on the aspects of this particular situation and shall not reflect on future considerations.

As this elevator has been sealed out of service for a period exceeding a year, it is required to be either removed from the structure or made dormant. To be made dormant, the suspension ropes must be removed, the car and counterweight must rest at the bottom of the hoistway, the hoistway doors must be permanently barricaded or sealed in the closed position on the hoistway side, and the power feed lines must be disconnected from the mainline disconnect switch.

If you have any questions or need additional information, please contact me at (517) 241-9337.

Sincerely,

Calvin W. Rogler, Chief
Elevator Safety Division

CWR/lb

cc: Mr. Scott Miller, Elevator Service Inc.

Providing for Michigan's Safety in the Built Environment

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P.O. BOX 30254 • LANSING, MICHIGAN 48909
Telephone (517) 241-9337 • Fax (517) 241-6301
www.michigan.gov



ELEVATOR COMPANY

6812 OLD 28TH, S.E. SUITE G, GRAND RAPIDS, MICHIGAN 49546-6933

(616) 942-8070

August 12, 2008

Mr. Calvin W. Rogler, Chief
Elevator Safety Division
Michigan Department of Consumers & Industry Services
Elevator Safety Division
P.O. Box 30254
Lansing, Michigan 48909-7754

Re: Veneklas Private Residence

Dear Mr. Rogler,

I represent a homeowner, Mr. Bradley Veneklas who has recently appeared before the board and was granted a variance to remove an existing residential elevator State Serial No. 6292 and replace it with one that travels approximately 56'.

After receiving the variance approval he has obtained several construction bids to raise the elevator shaft, remove the existing unit and install an entirely new residential elevator. These construction bids ranged from \$100,000 to \$150,000.

Due to the fact that the construction costs are excessive and would be unrecoverable in the resale of the condo at a future date, and that he already has an existing elevator, he is requesting permission to put the existing elevator back into service and forgo any additional travel that he has been granted in the variance. In other words, the elevator would travel from the first floor private lobby to the fourth floor private residence only. Historically, this was the school cafeteria elevator and it worked perfectly and was fully licensed until the day the school was sold for condo renovation, and continued use during early construction stages.

The existing elevator that he wants to put back into service should have never been taken out of service. During the renovation of the old school house, a crucial component (the rectifier) to the existing elevator was stolen and we believe it was sold for scrap metal value, and the elevator remained dormant while they searched for the part. At some point during the search, the elevator was sealed out of service due to inactivity. At that time the owner intended to replace it with a new one with greater travel, but now with the high costs and decreasing real estate market, he has found that option to be unobtainable. He now has all of the necessary components to make the existing elevator operational and safe. He is asking for an opportunity to present this option to the Elevator Safety Board.

This existing unit has two stops traveling from a private and secured main level lobby directly into his condominium on the fourth floor.

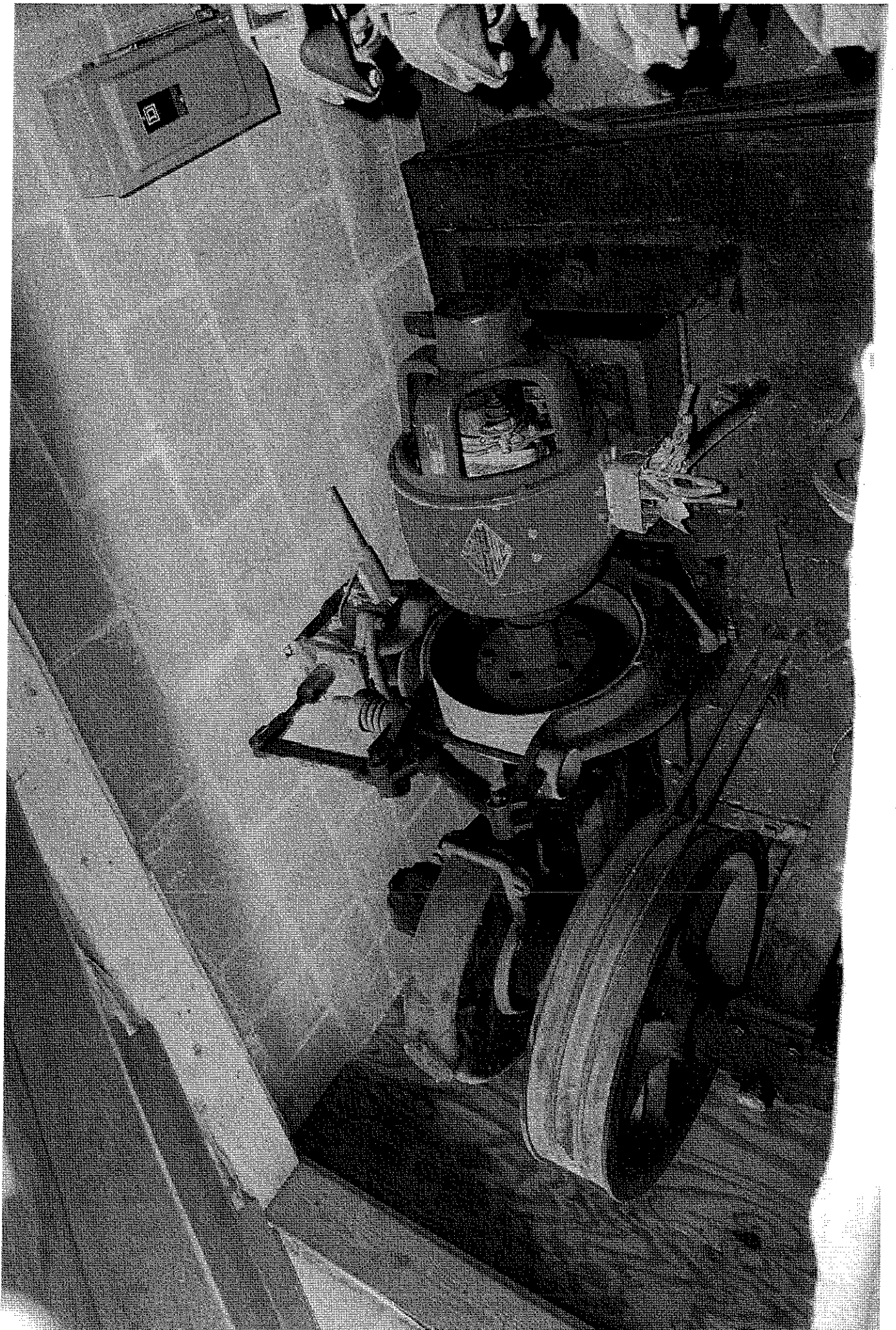
Photos are attached for clarity.

Thank you in advance for your review of our request.

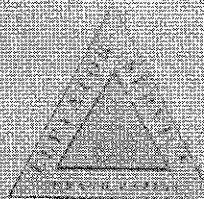
Sincerely,

Thomas E. McNally
McNally Elevator Company

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ELEVATOR SERVICE, INC.

817 CROWN NW, Grand Rapids, MI 49506

CALL (616) 235-4332



JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LABOR & ECONOMIC GROWTH
LANSING

KEITH W. COOLEY
DIRECTOR

October 21, 2008

To: Elevator Safety Board

From: C. W. Rogler

Subject: Request for a waiver to ASME A17.1-2004, sections 2.11.4 and 2.14.4

Request has been made by Advanced Technology & Testing for a waiver to ASME A17.1 2004, sections 2.11.4 and 2.14.4, regarding space guards for state serial #24233, located in, Livonia, Michigan.

Division Recommendation

The Elevator Safety Division recommends this variance be denied due to safety concerns.

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BUREAU OF CONSTRUCTION CODES
P.O. BOX 30254 • LANSING, MICHIGAN 48909
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August 7, 2008

12841 Stark Road
Livonia, MI 48150-1588
Phone: +1 734-522-1900
Fax: +1 734-522-9344

Michigan Dept. of Labor & Economic Growth
Bureau of Construction Codes & Fire Safety
Elevator Safety Division
P.O. Box 30255
Lansing, MI 48909
Attn: Mr. Cal Rogler, Chief Inspector

Dear Mr. Rogler,

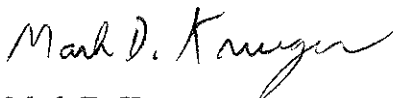
On July 8, 2008, ATW-Livonia received a correction order from Mr. Rick Schultz, General Inspector regarding the elevator located within the industrial plant located at 12841 Stark Road, Livonia, MI 48150. This correction order involves 2 items (see attached copy of the correction order).

Item 1 of the correction order was regarding a faulty alarm bell on the elevator. ATW-Livonia agrees to correct the alarm bell on the elevator. Item 2 of the correction order (R408.7031 of the State Elevator Rules regarding compliance with sections 2.11.4 and 2.14.4 of the ASME A 17.1 Code) states that ATW-Livonia must install space guards on both hoistway swing doors to restrict space from inside the hoistway doors to the edge of the hoistway sills to 0.75" or less. ATW-Livonia is requesting a waiver on this second item as the distance from the hoistway to the edge of the sill on the first floor door is 2.50", and the distance from the door to the edge of the sill on the second floor door is 4.00". These distances are so narrow that it would be impossible to trap an adult or child within this area. Also, ATW-Livonia is an industrial location with extremely limited access to children.

Mr. Rogler, I would like to formally request to make an appeal to the Michigan Elevator Safety Board in Lansing/Okemos on November 7, 2008. Please send me any necessary paperwork that I should fill-out to make a formal appeal. Your help in this matter is greatly appreciated.

If you have any questions, please feel free to telephone me at 734-266-4787. Thank you for your time in helping me to resolve this dispute.

Sincerely,



Mark D. Krueger

MICHIGAN DEPARTMENT OF LABOR & ECONOMIC GROWTH
BUREAU OF CONSTRUCTION CODES & FIRE SAFETY / ELEVATOR SAFETY DIVISION

P.O. BOX 30254 • LANSING, MI 48909 • (517) 241-9337

London

24233

644

70

400

ITEM	SECTION / RULE VIOLATED	REQUIRED CORRECTIVE ACTION(S)

[illegible]

The Department of Labor and Economic Growth will not discriminate against any individual or group because of race, sex, religion, age, national origin, color, marital status, disability, or political beliefs. If you need help with reading, writing, hearing, etc., under the Americans with Disabilities Act, you may make your needs known to this agency.

BCCFS-284 (01/05)

COPY DISTRIBUTION: White - Owner/User;

Canary - Elevator Safety Division:

Pink - Inspector



JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LABOR & ECONOMIC GROWTH
LANSING

KEITH W. COOLEY
DIRECTOR

October 21, 2008

To: Elevator Safety Board

From: C. W. Rogler

Subject: Request for a variance to ASME 17.1, 2004, section 2.8.1.2

Request has been made by Henry Ford Health System for a variance to ASME 17.1, 2004, section 2.8.1.2, regarding the installation of wireless antennas in the elevator hoistways.

Division Recommendation

The Elevator Safety Division recommends this variance be denied. ASME A17.1-2004, Section 2.8.1.2 States in part "2.8.1.2 Only such electrical wiring, raceways, and cables used directly in connection with the elevator, including wiring for signals, for communication with the car, for lighting, heating, air conditioning, and ventilating the car, for fire detecting systems, for pit sump pumps, and for heating and lighting the hoistway and/or machine room shall be permitted to be installed inside the hoistway."

A review of the preceding Section along with an Interpretation, Inquiry 03-16, which asks a question about using a wireless communication system to meet the requirements of Section 2.27 Emergency Communication system for the elevator, explains that "as long as the coax wiring and antennas are only used for communication with the elevator(s), they are permitted." The system proposed is not for communication with the car as required in Section 2.27, it is for communication with people riding on the car.

There is nothing in ASME to prevent the installation of these antennas in the elevator car.

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October 7, 2008,

Mr. Calvin W. Rogler, Chief
Elevator Safety Division
Michigan Department of Consumers & Industry Services
Elevator Safety Division
P.O. Box 30254
Lansing, Michigan 48909-7754

Re: 802.11 A/B/G/N Antenna Hoistway variance for Henry Ford Health System

Dear Mr. Rogler,

This letter is our request to be placed on the upcoming Elevator Safety Board meeting on Nov 7th, 2008 to present the case for a variance to Rule 2.8.1.2 of ASME A17.1-2004.

We have received approval to install passive wireless antennas in the elevator shafts at the West Bloomfield hospital in the past and are seeking to increase the scope of the approvals to include all existing and new Henry Ford Health System elevator Hoistways. Installation of the antennas is essential for the proper operation of HFHS State of the Art wireless system designed to support life sustaining monitoring devices and facilitate improve patient care. We have developed an installation design with Otis Elevator and are confident this design will not interfere with the operation of the elevator and will not impose any safety issues. We understand that elevator hoistway access is restricted to licensed elevator personnel, and will contract licensed elevator companies for the initial installation as well as any ongoing maintenance of the antennas.

Please see attachments.

Best Regards

Craig Albright
HFHS Wireless Program Manager
Calbrig1@hfhs.org
734-637-3869



INFORMATION TECHNOLOGY
HFHS WEST BLOOMFIELD
HOSPITAL – ELEVATOR
WIRELESS SURVEY

SIEMENS

HFHS West Bloomfield Hospital
Elevator Shaft Wireless Antenna Implementation

DRAFT



INFORMATION TECHNOLOGY
HFHS WEST BLOOMFIELD
HOSPITAL – ELEVATOR
WIRELESS SURVEY

SIEMENS

Summary

The proposed method is to provide wireless coverage within the West Bloomfield Hospital elevator hoistways/cars.

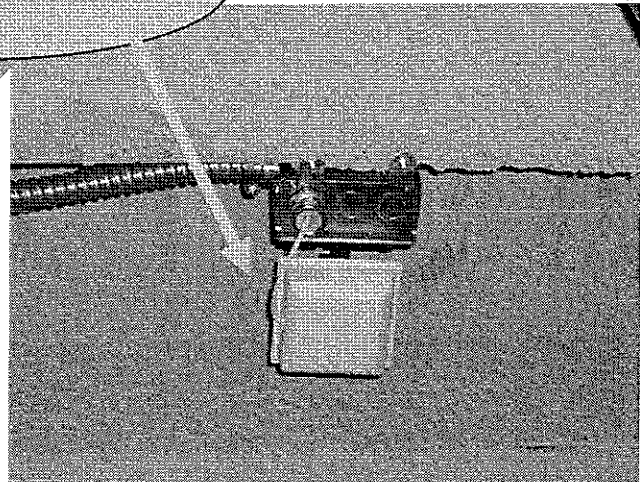
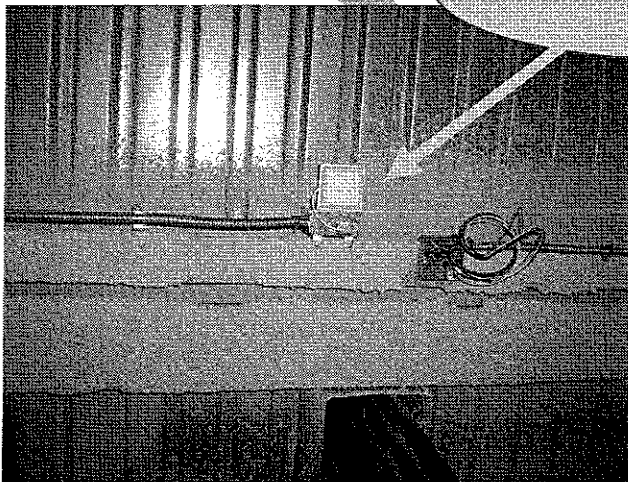
Proposed Method/Design

To install a wireless access point outside each elevator hoistway and connect them to two directional antennas installed in the top of the hoistway/elevator shaft. This proposed method decreases the likelihood of a dropped signal which would result in a loss of wireless communications. This is accomplished by reducing the roaming burden on the client/clinical device (e.g., SpectraLink wireless phone, handheld, patient vital monitoring, having to transfer usage of multiple access points to maintain the continuity of the call.) and ensures a consistent predictable radio frequency (RF) signal. It requires the installation of the wireless access point above or concealed within the ceiling on the top floor of the facility and connecting it to an antenna installed at the top of the elevator hoist way.

Tools Utilized to perform the Elevator shaft test

- Siemens HighPath 2620 Access Point
- 2 Cushcraft directional Antennas (S24497P)
- 2 – 25 foot Low Loss LMR-400 cable with reverse polarity SMA plug.
- Air magnet laptop Analyzer

Antennas mounted vertically
pointing straight down, avoiding
steel

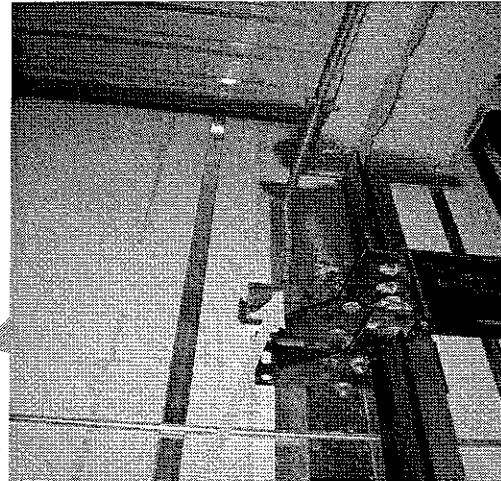
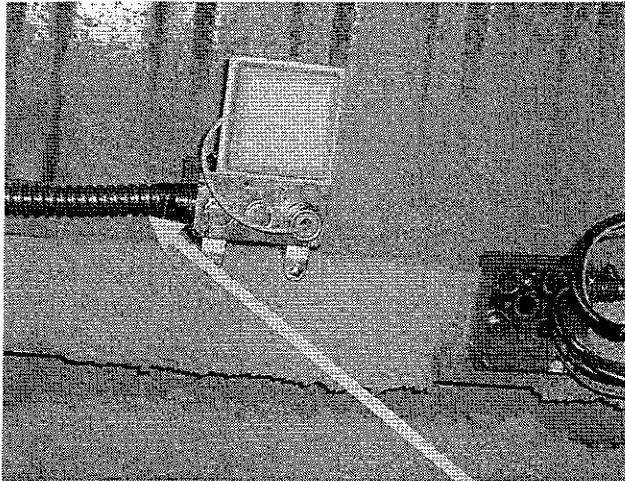


Picture shows Cushcraft antenna (S24497P) installed on top of the shaft directly pointing straight below.
(avoiding any metals beams)



INFORMATION TECHNOLOGY
HFHS WEST BLOOMFIELD
HOSPITAL – ELEVATOR
WIRELESS SURVEY

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Low loss LMR 400 cable ran
through the antenna to the AP
installed outside the elevator

Design Assumptions and Goals

A wireless access point (AP) placement analysis inside the elevator shaft was completed for the West Bloomfield Hospital Pod R 3rd floor. The analysis was performed using Air Magnet Analyzer. The purpose of this field report write up is to provide associated coverage that will be provided by Siemens HiPath 2620 AP inside the elevator shaft. Onsite validation was performed utilizing the Air Magnet tool.

- User density: unknown



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WIRELESS SURVEY

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- Environmental issues such as: Metal shaft, Steel beams/walls
- Access Point properties:
 - Siemens HiPath 2620 access point with Cushcraft dual band 7.0 dBi antennas model S24497P will be used for the deployment.
 - Dual band coverage (802.11 a/b/g) with 50% power for the b/g band and 75% power for the a band output density and AP redundancy.
 - Dynamic radio management will be used.

Test Procedure

1. Elevator in Pod R was selected to perform test analysis for the Access Point/Antenna placement and to conduct data rate test. KLA electricians had installed 2 Cushcraft dual band directional 7.0 dBi antennas inside on top of the elevator shaft with antenna facing straight below the floors.
2. Siemens Wireless Engineers used the Air Magnet Analyzer tool to perform the tests to measure the RF signal strength inside and outside the elevator shaft. These results will be final and will be used for all future Siemens/Henry Ford Elevator shaft AP/Antenna design and installations. The steps involved using Air Magnet Signal Distribution log to monitor the RF data rates, SNR (Signal-to Noise ratio), minimum and maximum signal strength. (**documented in detail – see Appendix**)
3. Tests were performed by Wireless Engineers inside the shaft along with presence of KLA and OTIS elevator. RF readings were measured inside the elevator shaft on 3rd floor as elevator shaft went on the bottom floor (Garden Level) of Pod R. RF readings were also taken on each floors outside the elevator shaft and were recorded on the Air Magnet tool.

Results

The RF test results that were recorded inside the elevator as shaft was being moved top to bottom between each floors are as follows

POD-R Elevator #1

Inside the shaft

A radio

Min Signal -49

Max Signal -32

SNR (Signal to Noise Ratio) 64

b/g radio

Min Signal -47

Max Signal -29

SNR 64

The RF Test results that were recorded outside each floors of the elevator shaft are as follows:

First floor outside the elevator shaft

A radio

Min Signal -64

Max Signal -50

SNR (Signal to Noise Ratio) 93

b/g radio

Min Signal -61

Max Signal -47

SNR (Signal to Noise Ratio) 90

Second floor outside the elevator shaft

A radio

Min Signal -64

Max Signal -47

b/g radio

Min Signal -58

Max Signal -40



INFORMATION TECHNOLOGY
HFHS WEST BLOOMFIELD
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WIRELESS SURVEY

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SNR (Signal to Noise Ratio) 96

SNR (Signal to Noise Ratio) 98

Third floor outside the elevator shaft

A radio

Min Signal -55

Max Signal -35

SNR (Signal to Noise Ratio) 57

b/g radio

Min Signal -57

Max Signal -37

SNR (Signal to Noise Ratio) 55

POD-R Elevator #2

Inside Shaft

A Radio

Min Signal -69

Max Signal -47

SNR (Signal to Noise Ratio) 51

b/g radio

Min Signal -71

Max Signal -48

SNR (Signal to Noise Ratio) 50

The RF Test results that were recorded outside each floors of the elevator shaft are as follows:

Garden floor outside the elevator shaft

A radio

Min Signal -64

Max Signal -52

SNR (Signal to Noise Ratio) 43

b/g radio

Min Signal -72

Max Signal -56

SNR (Signal to Noise Ratio) 91

First floor outside the elevator shaft

A radio

Min Signal -60

Max Signal -51

SNR (Signal to Noise Ratio) 45

b/g radio

Min Signal -67

Max Signal -55

SNR (Signal to Noise Ratio) 43

Second floor outside the elevator shaft

A radio

Min Signal -57

Max Signal -44

SNR (Signal to Noise Ratio) 52

b/g radio

Min Signal -71

Max Signal -54

SNR (Signal to Noise Ratio) 39

Third floor outside the elevator shaft

A radio

Min Signal -60

Max Signal -58

SNR (Signal to Noise Ratio) 46

b/g radio

Min Signal -61

Max Signal -49

SNR (Signal to Noise Ratio) 35

Recommendations:

Based on the RF results that were documented using the Air Magnet Analyzer tool it our recommendation that going forward the selected Siemens HiPath 2620 Access Point and Cushcraft dual band directional antenna with 7.0 dBi (model # S24497P) to be used for all future elevator shaft installations. Selected Cushcraft wireless antenna has been certified by Siemens Communications. The test conducted and the RF results shown above and



INFORMATION TECHNOLOGY
HFHS WEST BLOOMFIELD
HOSPITAL – ELEVATOR
WIRELESS SURVEY

SIEMENS

attached in appendix below shows adequate coverage for wireless inside and outside the elevator shaft with minimal point of failure.

Appendix

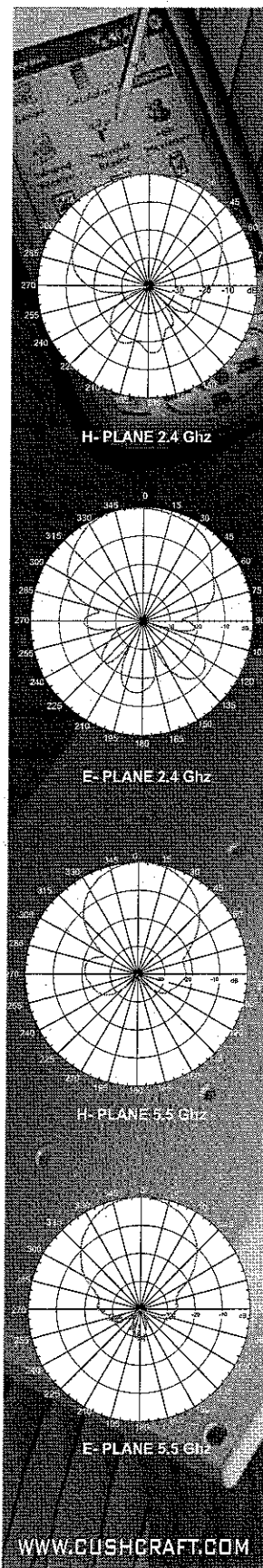
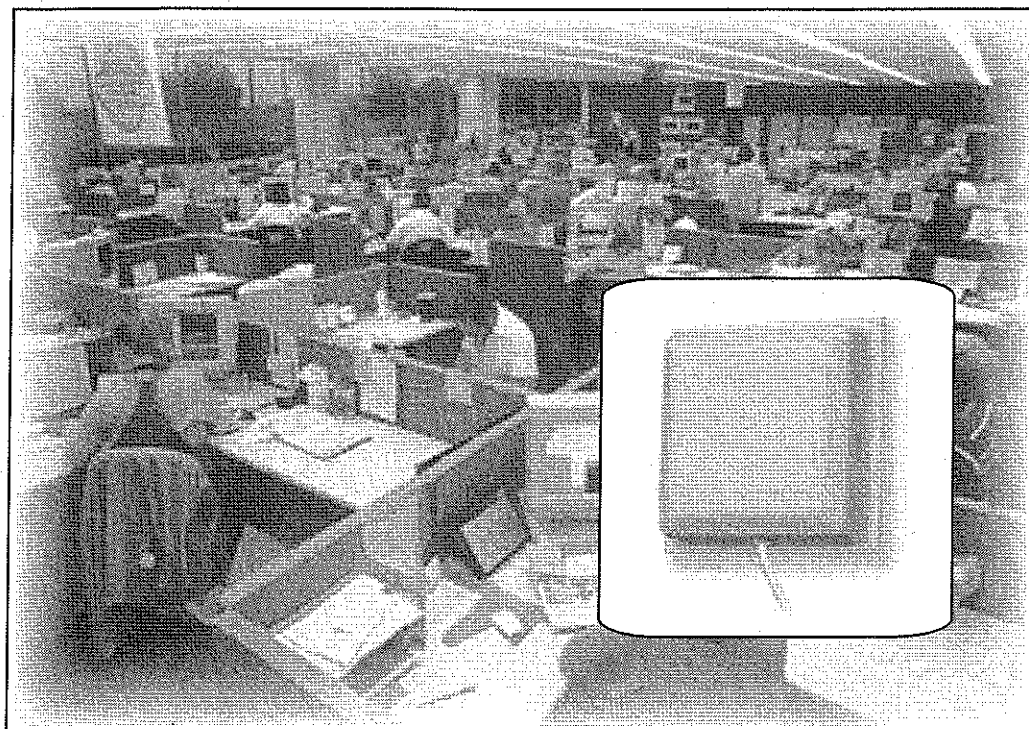


West Bloomfield Elevators.zip

DRAFT

S24497P**DUAL BAND PANEL ANTENNA.**

- 802.11 A/B/G AND WIDE BAND FREQUENCY COVERAGE
- VARIETY OF CABLE LENGTHS AND CONNECTORS AVAILABLE
- FAST AND EASY INSTALLATION WITH ARTICULATING MOUNT INCLUDED
- NEUTRAL COLOR AND DIMINUTIVE PROFILE DISAPPEARS INTO THE ENVIRONMENT

**DUAL BAND, TRI-MODE DIRECTIONAL ANTENNA**

Cushcraft's new dual band tri-mode directional antenna allows the customer to install one antenna system and continue to use that one antenna system regardless of the 802.11 mode of operation or frequency band. Your customer can install and use the antenna system for 802.11b or g service today and can continue to use the antenna to support an 802.11a system if they deploy one at some later date. Customers deploying an 802.11b or g system today intending to keep those systems functioning while also deploying an 802.11a system can deploy some number of them for b/g and at some later date deploy some number for 802.11a mixing and matching as he deploys while maintaining the same aesthetic approach for all of his antennas.

Pattern shapes are uniform and symmetrical providing high levels of signal density into defined coverage zones, an important feature for high data rate, high capacity environments such as offices.

Standard cable length is 36" and the standard connector is the reverse polarity TNC.

However other coax length and connector alternatives are available as well.

Call your Cushcraft Sales Representative to place an order or visit us at:

www.cushcraft.com

PRODUCT TECHNICAL SPECIFICATIONS

Frequency (GHz):	2.4 - 2.5 & 4.90-5.99
Gain:	7 dBi (nominal)
Elevation beamwidth:	
Lowband 2.4-2.5 (Highband 4.9-5.9)	66° (60°)
Azimuth beamwidth:	
Lowband 2.4-2.5 (Highband 4.9-5.9)	68° (52°)
Polarization:	Linear Vertical
Weight (Antenna Only) lb.(kg):	.5 (.23)
VSWR:	2:1
Mounting Style:	Wall mount
Dimensions (in):	4.1 x 4.1 x 1.5
Pigtail:	36"
Enclosure:	Acrylic / PVC
Power (Watts):	10
RF Connectors:	Reverse TNC

GROUNDING

System grounding and lightning protection are Essential especially for exterior-mounted antennas exposed to the elements. Never install an antenna where it may fall and contact electrical lines (refer to the National Electrical Code).

SPECIFICATIONS

Model:	S24497P
Frequency, MHz:	2400-2500 / 4900-6000
Gain:	2400-2500 7 dBi Nominal 4900-6000 8 dBi Nominal
VSWR:	2:1
E-Plane (3 dB beamwidth):	68° @ (2400-2500 MHz) 60° @ (4900-6000 MHz)
H-Plane (3 dB beamwidth):	68° @ (2400-2500 MHz) 32° @ (4900-6000 MHz)
Polarization:	Linear, Vertical
Front to Back Ratio:	10 dBi min @ (2400-2500 MHz) 15 dBi min @ (4900-6000 MHz)
RF Connector:	Reverse TNC
Cable:	12" Plenum
Weight lb. (kg):	.83 (.3)
Mounting:	Wall / Mast
Dimensions in.(cm):	4 x 4 x 1.5 (10.2 x 10.2 x 3.8)
Enclosure:	PVC / Acrylic
Mast Diameter Max. in.(cm):	2 (5.1) For Supplied Strap
Power (Watts):	2

LIMITED WARRANTY

Cushcraft Corporation, 48 Perimeter Road, Manchester, New Hampshire 03103, warrants to the original consumer purchaser for one year from date of purchase that each Cushcraft antenna is free of defects in material or workmanship. If, in the judgement of Cushcraft, any such antenna is defective, then Cushcraft Corporation will, at its option, repair or replace the antenna at its expense within thirty days of the date the antenna is returned (at purchasers expense) to Cushcraft or one of its authorized representatives. This warranty is in lieu of all other expressed warranties, any implied warranty is limited in duration to one year. Cushcraft Corporation shall not be liable for any incidental or consequential damages which may result from a defect. Some states do not allow limitations on how long an implied warranty lasts or exclusions or limitations of incidental or consequential damages, so the above limitation and exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. This warranty does not extend to any products which have been subject to misuse, neglect, accident or improper installation. Any repairs or alterations outside of the Cushcraft factory will nullify this warranty.



CUSHCRAFT
CORPORATION

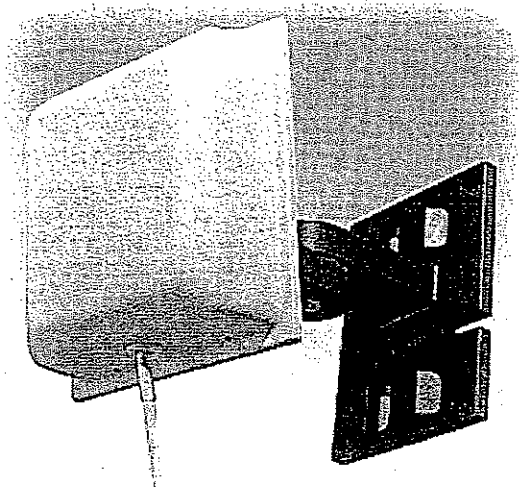
48 PERIMETER ROAD, MANCHESTER, NH 03103
Tel: 603-627-7877 • Fax: 603-627-1764

e-mail: sales@cushcraft.com • website: www.cushcraft.com

S24497P

(2400-2500 / 4900 - 6000 MHz)

ASSEMBLY AND INSTALLATION INSTRUCTIONS



APPLICATION

Designed for wireless LAN service, Cushcraft's S24497P is a directional patch array enclosed in a uv-stable weatherproof radome. The focused radiation pattern may be used to extend point-to-point link coverage or to provide targeted sector coverage in the 2.4 and 5 GHz band.

SAFETY

Cushcraft's S24497P and all associated equipment should be installed in accordance with applicable local and national electrical code guidelines to ensure safe operation.

ANTENNA LOCATION

The S24497P may be mounted at interior or exterior locations. A line-of-sight signal path works best for point-to-point links. Although 5 GHz signals penetrate cubical dividers and interior partitions with little attenuation, reinforced block walls, banks of metal cabinets, or steel shelving may attenuate signals or cause multipath, a condition where reflected signals interfere with the primary signal. Because antenna beamwidth is narrow, it is important to aim the antenna accurately during installation in order to provide optimum gain and best performance.

MOUNTING

The S24497PF is supplied with a universal articulating mount that accepts mast diameters up to 2 inches (5.1cm) or mounts to any flat vertical surface. This mount is especially designed to provide wide-range articulation in both the azimuth and elevation planes.

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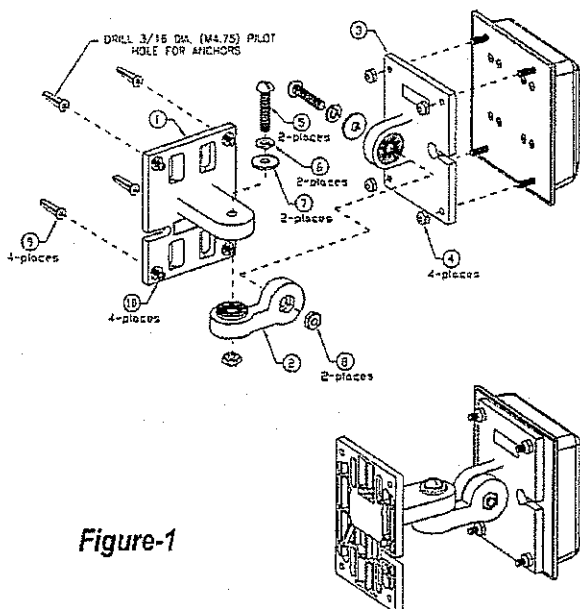


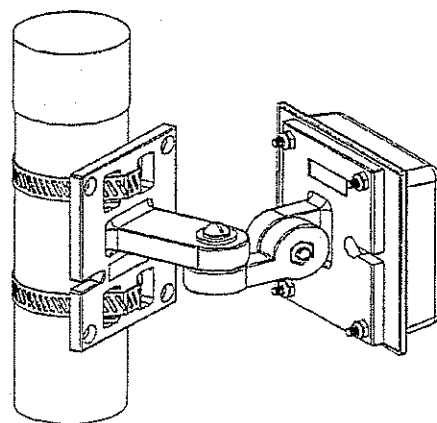
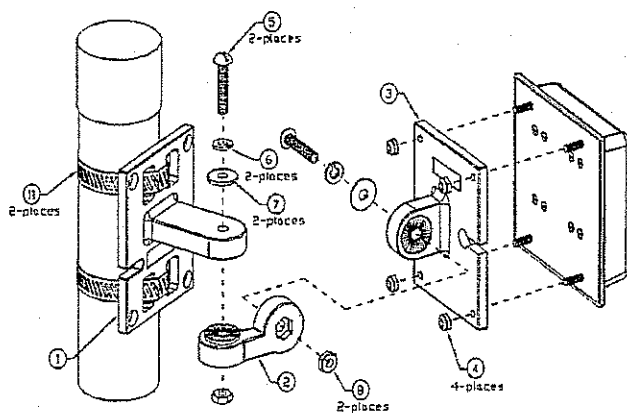
Figure-1

KEY	DISPLAY	DESC	SIZE	QTY
7		FLAT WASHER	1/4"	2
11		HOSE CLAMP	—	2
2		ARTICULATING ARM	—	1
1		WALL / MAST MOUNT	—	1
3		ANTENNA MOUNT	—	3
9		PLASTIC WALL ANCHOR	# 8	4
10		SS MACHINE SCREW	#8-18 x 3/4"	4
5		MACHINE SCREW	1/4" -20 x 1-1/4"	2
6		SS SPLIT LOCK WASHER	1/4"	2
8		SS HEX NUT	1/4" -20	2
4		SS / Nylon HEX NUT	8/32"	4

ASSEMBLY

Install the articulating mount to the antenna back plane, as shown in Figure-1:

1. Find the molded antenna mount (3) and four 8-32 nylon lock nuts (4). Use the nuts to attach the mount to the exposed studs on the back of the antenna.
2. Find the molded articulating arm (2). Also, find a 1/4"-20 x 1-1/4" machine screw (5), 1/4" lock washer (6), 1/4" flat washer (7), and 1/4"-20 hex nut (8). Use hardware to secure the molded arm to the antenna mount as shown in Figure-1.
3. For installation on flat surfaces, find the molded wall/mast mount (1) and use it as a drill template to mark hole locations. Drill four 3/16" diameter pilot holes and install wall anchors (9). Install the mount using four 8-18 x 3/4" self-tapping screws (10).
4. For pole or mast installations, find two worm clamps (11) and install as shown on the molded wall-mast mount (1). Encircle pole with each band and tighten.
5. To attach the antenna assembly to the wall/mast mount, find a 1/4" x 1-1/4" machine screw (5) and install a 1/4" lock washer (6) and a 1/4" flat washer (7) as shown. Use the screw to attach the free end of the articulating arm to the mount, securing in place with a 1/4"-20 nut (8).
6. Loosen 1/4" pivot screws as needed to position antenna for desired azimuth and elevation steering. When antenna is in adjusted, tighten all hardware securely.





JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LABOR & ECONOMIC GROWTH
LANSING

KEITH W. COOLEY
DIRECTOR

October 21, 2008

To: Elevator Safety Board

From: C. W. Rogler

Subject: Request for a variance to ASME A18.1-2003

Request has been made by Adaptive Environments for a variance to allow a vertical platform lift to exceed the 12' maximum travel limitations in section 2.7.1 of ASME A18.1-2003 at Sunnybrook Lanes, in Sterling Heights, Michigan.

Division Recommendation

The ASME A18.1 – 2008 edition, which the Elevator Safety Division will be proposing for adoption this year, allows for 14 feet of travel. As this variance is requesting a rise of approximately 13'6" the division recommends this variance be approved.

Providing for Michigan's Safety in the Built Environment

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October 13, 2008

Michigan Department of Labor & Economic Growth
Bureau of Construction Codes
Elevator Safety Division
P.O. Box 30254, Lansing, MI 48909

Elevator Safety Board

Dear Members of the Board:

I am writing on behalf of our customer Sunnybrook Lanes. Sunnybrook is an entertainment/recreational facility (i.e.: bowling alley) located in Sterling Heights, Michigan.

Sunnybrook plans an expansion of their existing lounge facility with a second story renovation of 3,416 square feet adjoining the existing lounge. They wish to utilize a vertical platform lift in this application for handicap accessibility per Michigan Building Code.

We are requesting a variance to ASME A18.1 2001 (current Michigan standard) Part 2.7.1 which states in part; "The travel shall not exceed 12 ft." The travel distance between the grade and upper level of this facility is 13'6". The installation would be otherwise, fully compliant all Michigan code requirements. Drawings and specifications are attached.

It should be noted that the current A18 Standard allows up to 14 ft. of travel. This version of code has not yet been adopted by the State of Michigan.

However, given the trend of Michigan's recent code revisions, toward consistency with the national standard, it is reasonable to believe this will likely become our code in the future.

Thank you for your time and consideration concerning this matter.

Yours truly,

A handwritten signature in black ink, appearing to read 'Mark F. Bosley', is written over the typed name.

Mark F. Bosley, President



43600 Utica Road • Sterling Heights, Michigan 48314
586-739-9300 • www.adaptive-environments.com • 586-739-6220 (FAX)

National Wheel-O-Vator
A Division of ThyssenKrupp Access
WOV355 1:2 Roped Hydraulic

Model

Model Number: **WOV15**
Rated Capacity: **750#**
Car Weight (Inc. Frame): **800#**
Pit Depth: **12"**
Floor To Floor Travel: **160"**
Overhead: **96"**
Travel Speed: **30 fpm**

Cab

WOV Flush Wall Cab
Clear Platform: **42" x 60"**
Height: **6' 8"**
Panels: **Birch/VERIFY**
Ceiling: **Suspended Ceiling**
Finish: **Unfinished**
Car Operating Panel: **Brushed Stainless**
Keyed Car Operating Panel: **No**
Cab Lighting: **(2) Fluorescent Lights**
Handrail: **Brushed Stainless**
Flooring: **Black Vinyl [Shipped Loose]**
Recessed Phone Box: **N/A**

Gate

Type: **No Gate**
Height:
Autogate Operator: **No**

Drive System

Motor: **Submersed 3 HP Motor - 208/230 Single Phase**
1750 RPM - 15 FL Amps
Pump: **30L Screw Pump With 300 Micron Screen**
Estimated Working Pressure: **450 psi**
Estimated Pressure Relief: **625 psi**
Valve: **Two Speed Operation w/ Manual Lowering**
Cylinder: **80mm Diameter Piston**
114mm Diameter Cylinder
Single Piece Cylinder
Hydraulic Oil: **Type 32 All Weather Grade ***
30 Gallon Capacity
Suspension Means: **(2) 3/8" 7x19 Steel Core Aircraft**
Cables, 14400# Breaking Strength
Hydraulic Line: **3/4" Schedule 80 Pipe Or Equivalent**
11000 psi Burst Strength *
Operating Temperature: **50° - 90° F**
Buffer Springs: **(2) 1522 1/2# Springs - 1 3/4" Stroke**
Stop Blocks: **N/A**

(* = Items Not Supplied By Manufacturer)

Main Electrical Supply *

208/230 VAC Single Phase (30 Amp Dedicated)

Cab Lighting Electrical Supply *

120 VAC Single Phase (15 Amp Dedicated)

Controls

Operation: **Constant Pressure**
Stops: **2**
Final Limits: **Upper and Lower Finals**
Battery Lowering: **Floor Selective**
Floor Connections: **In The Main Controller**
15 Feet Extra Travel Cable

Hoistway

Doors & Hardware: **By Others**
Door Locks: **Wire Only For Electric Strike 6211 DS**
Hall Stations: **(2) Brushed Stainless**
Keyed Hall Stations: **No**

Power Door Operator(s): **None**

Standard Features

UL Listed Controller & Motor
Emergency Stop & Alarm
Emergency Cab Lighting
Automatic Cab Lighting
Cartop & Pit Stop Switch - "Push To Stop"
Low Pressure Switch
Low Oil Run Timer
Broken Rope Safety Switch
Type "A" Instantaneous Safeties (Roller)
Type "C" Safety (Rupture Valve)
1" - 3/4" Reducer Bushing
3/8" Wedge Rope Shackles
Field Programmable Alpha Numeric Dot Matrix
Position Indicator In Car

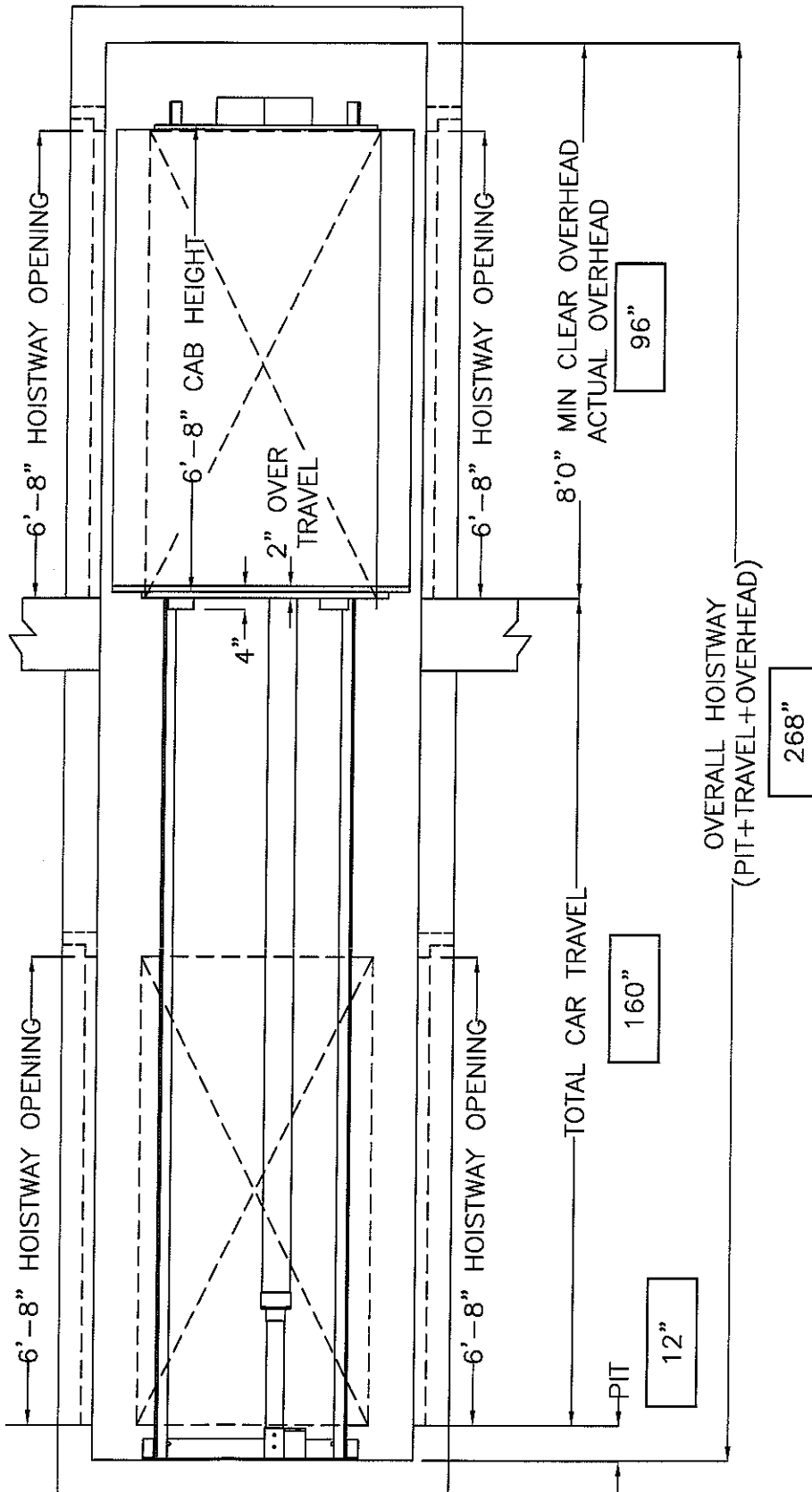
Optional Features

Main Line Disconnect By Others
Cab Lighting Disconnect By Others
TAL-SAR LIGHT CURTAIN
1LH-1RH CDP1000 COMPLETE W/6211DS STRIKES AND
DHP100 W/NORTON DOOR CLOSERS

National Wheel-O-Vator			
509 W. FRONT ST.		ROANOKE, ILLINOIS 61561	
A Division of ThyssenKrupp Access		800-551-9095	
1:2 ROPED HYDRAULIC SPECIFICATION SHEET			
WOV355 - VERTICAL PLATFORM LIFT			
SCALE:	DATE:	COMPLETED BY:	DRAWING NUMBER:
NONE	8/18/08	SLR	605372.hrd
DEALER NAME:			
ADAPTIVE ENVIRONMENTS, INC. - MI04			
JOB REFERENCE:			
JEM/SUNNY BROOK GC			

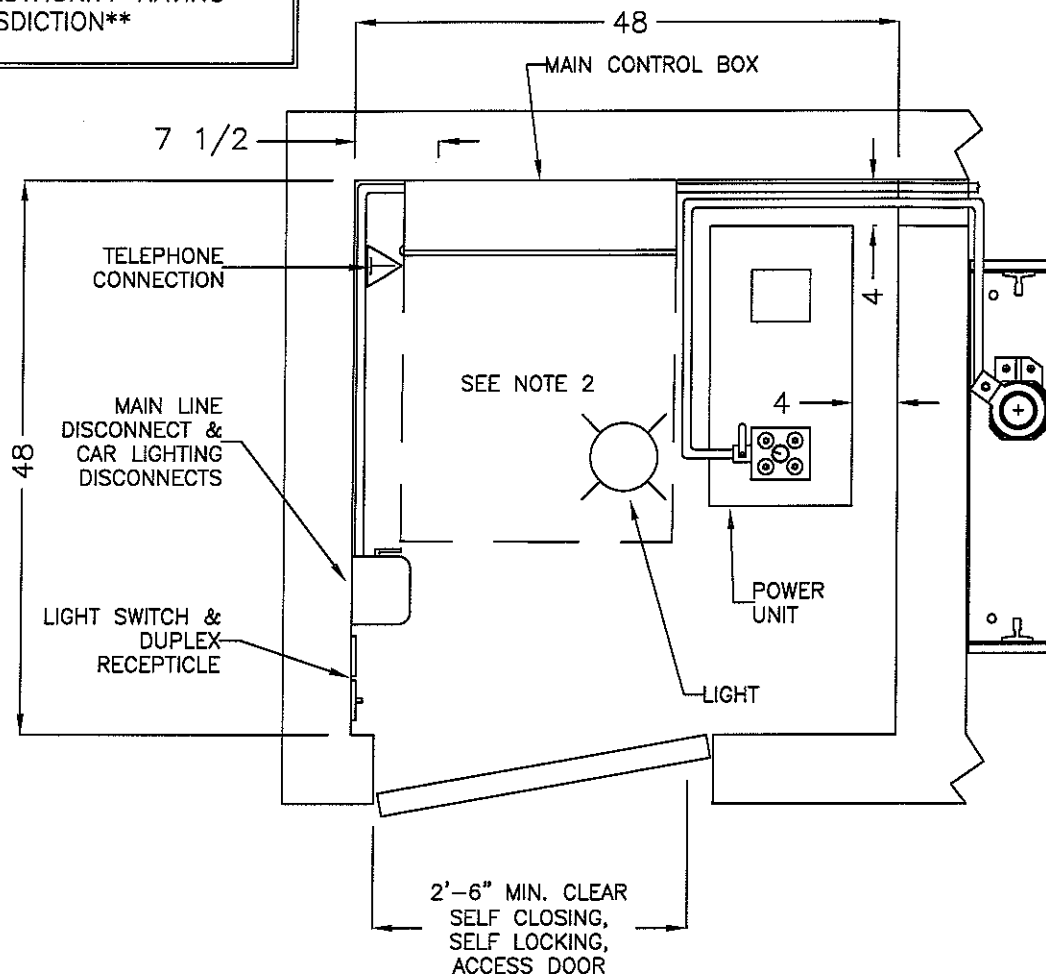
NOTES:

1. PLEASE DESIGNATE WITH A CIRCLE THE APPROPRIATE HOISTWAY OPENINGS PER FLOOR.
2. IF 8'0" MIN. OVERHEAD CLEARANCE CANNOT BE OBTAINED, CONTACT NATIONAL WHEEL-O-VATOR FOR FURTHER INFORMATION.
3. MAXIMUM LIFT HEIGHT WITHOUT VARIANCE FOR A18.1IS 14' AND B355-00 IS 23'.
4. PIT FLOOR TO BE DESIGNED FOR
 IMPACT LOAD @ PIT
 4300 LBS (750# CAPACITY)
 4700 LBS (950# CAPACITY)
 STATIC LOAD @ PIT
 2700 LBS (750# CAPACITY)
 2900 LBS (950# CAPACITY)



NATIONAL WHEEL-O-VATOR			
509 W. FRONT ST. ROANOKE, ILLINOIS 61561 800-551-9085			
2 STOP ELEVATION			
WOV 355			
SCALE:	DATE:	DRAWN BY:	DRAWING NUMBER:
NONE	8-18-08	SLR	605372
DEALER:			
ADAPTIVE ENVIRONMENTS			
JOB:			
JEM/SUNNY BROOK GC			

****DEALER IS RESPONSIBLE FOR INSURING THAT THE MACHINE SPACE LAYOUT AND THE MACHINE LOCATION MEET CODE REQUIREMENTS IMPOSED BY LOCAL AUTHORITY HAVING JURISDICTION****



NOTES:

- 1) LOCAL, STATE, & NATIONAL CODES MUST ALWAYS BE FOLLOWED.
- 2) 3'-0" MINIMUM CLEARANCE IN FRONT OF THE CONTROL PANEL REQUIRED BY N.E.C.
- 3) DISCONNECT SWITCHES AND LIGHT SWITCH TO BE LOCATED ON THE STRIKE SIDE OF THE MACHINE ROOM DOOR.
- 4) MAIN LINE DISCONNECT TO BE FUSED AND CAPABLE OF BEING LOCKED IN THE OPEN POSITION.
- 5) CAR LIGHT DISCONNECT TO BE CAPABLE OF BEING LOCKED IN THE OPEN POSITION AND HAVING OVERCURRENT PROTECTION MEANS IN THE MACHINE ROOM.
- 6) THE PUMP UNIT SHOULD NOT BE OVER 40' AWAY FROM THE CYLINDER.

****MAIN LINE DISCONNECT & CAR LIGHT DISCONNECT BY OTHERS****

MAIN LINE DISCONNECT
3 POLES
(1 FOR BATTERY LOWERING)

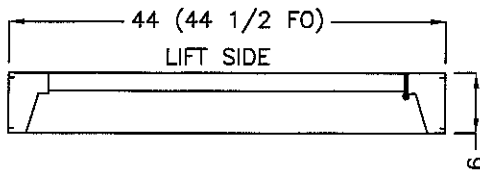
CAR LIGHT DISCONNECT
1 POLE

MAIN CONTROL BOX
24"H X 24"W X 8"D

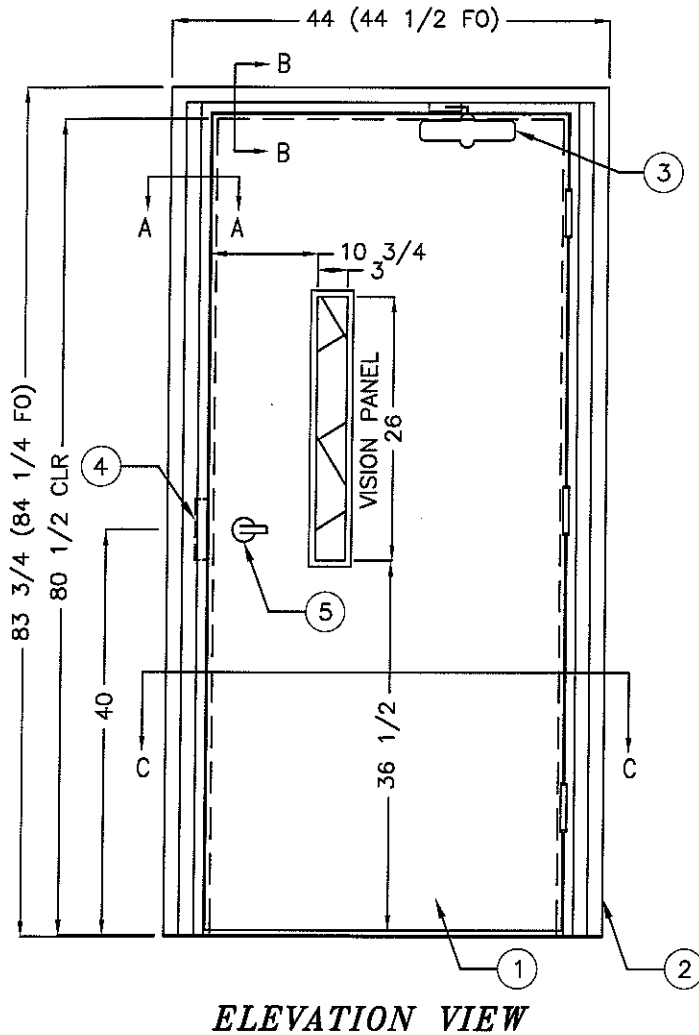
SUBMERGED POWER UNIT
35"H X 24 1/4"W X 12 1/2"D

NATIONAL WHEEL-O-VATOR
509 W. FRONT ST. ROANOKE, ILLINOIS 61561 800-551-9095

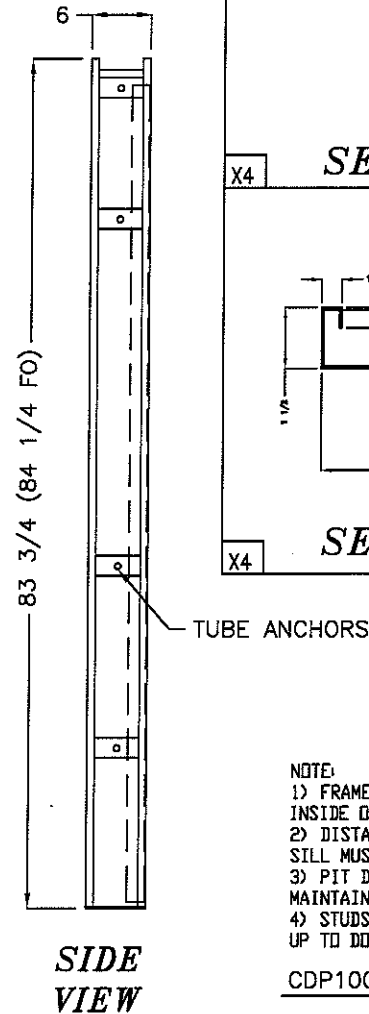
MACHINE ROOM LAYOUT WOV 355
SCALE: NONE DATE: 10/8/07 DRAWN BY: MW DRAWING NUMBER: WV-2020C
DEALER:
JOB:



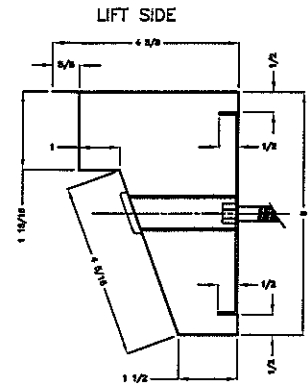
SECTION C-C



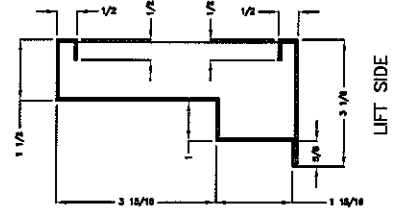
ELEVATION VIEW



SIDE VIEW



SECTION A-A



SECTION B-B

NOTE:

- 1) FRAME MUST BE INSTALLED FLUSH TO INSIDE OF FINISHED HOISTWAY.
- 2) DISTANCE BETWEEN PLATFORM AND SILL MUST BE BETWEEN 3/8" - 3/4".
- 3) PIT DIMENSIONS MUST BE MAINTAINED INSIDE THE HOISTWAY.
- 4) STUDS AND 5/8" DRYWALL FINISHED UP TO DOOR FRAME.

CDP1000 DOOR PACKAGE

- 1- FIRE RATED DOOR
1 1/2 HR B LABEL
- 2- FIRE RATED FRAME
- 3- ADJUSTABLE DELAY
ACTION DOOR CLOSER
- 4- ELECTRIC STRIKE INTERLOCK
LATCH SET
- 5- LEVER HANDLE OUTSIDE
ROSE PLATE INSIDE

DHP 100

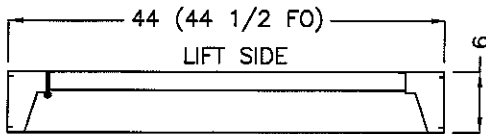
SWING OPTIONAL (LEFT HAND SHOWN)
ALL DIMENSIONS ARE NOMINAL

NATIONAL WHEEL-O-VATOR

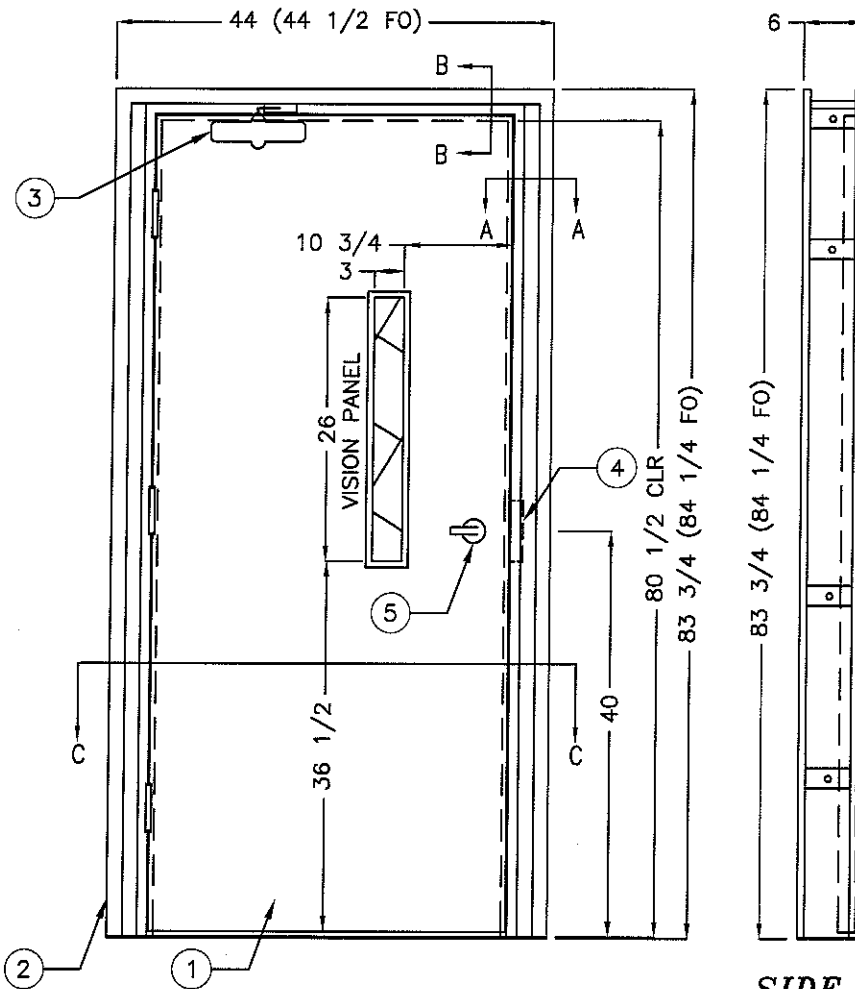
509 W. FRONT ST. ROANOKE, ILLINOIS 61561 800-551-9095

SCALE: NONE	DATE: 4-9-08	DRAWN BY: MD	DRAWING NUMBER: 1005
MODEL: CDP 1000	FIRE-RATING: 1 1/2 HR B LABEL	DOOR SIZE: 3'0" X 80 1/2"	
DOOR SWING: LEFT HAND	INTERLOCK TYPE: ELECTRIC STRIKE	HANDLE TYPE: PDQ	
DOOR OPERATION: NORTON DOOR CLOSER			NWOV SUP: EZ

DOOR IS SUITABLE TO BE
MOUNTED IN STUD OR
MASONRY APPLICATIONS

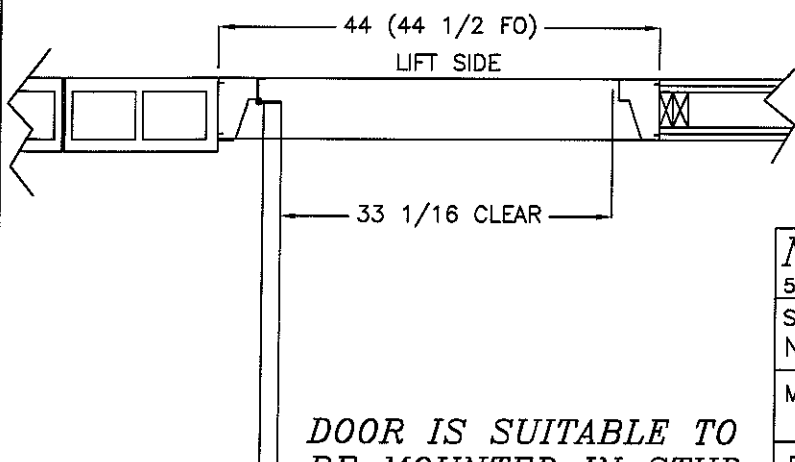


SECTION C-C

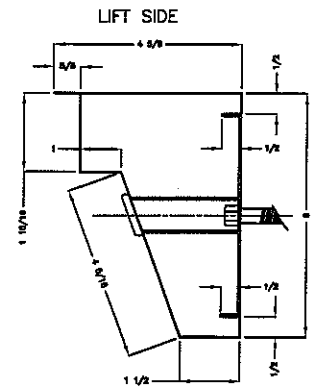


ELEVATION VIEW

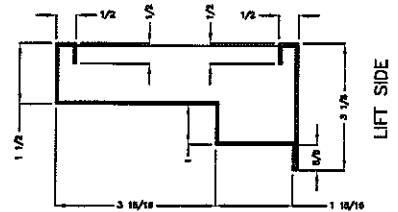
SIDE VIEW



DOOR IS SUITABLE TO
BE MOUNTED IN STUD
OR MASONRY
APPLICATIONS



SECTION A-A



SECTION B-B

TUBE ANCHORS

NOTE:

- 1) FRAME MUST BE INSTALLED FLUSH TO INSIDE OF FINISHED HOISTWAY.
- 2) DISTANCE BETWEEN PLATFORM AND SILL MUST BE BETWEEN 3/8" - 3/4".
- 3) PIT DIMENSIONS MUST BE MAINTAINED INSIDE THE HOISTWAY.
- 4) STUDS AND 5/8" DRYWALL FINISHED UP TO DOOR FRAME.

CDP1000 DOOR PACKAGE

- 1- FIRE RATED DOOR
1 1/2 HR B LABEL
- 2- FIRE RATED FRAME
- 3- ADJUSTABLE DELAY
ACTION DOOR CLOSER
- 4- ELECTRIC STRIKE INTERLOCK
LATCH SET
- 5- LEVER HANDLE OUTSIDE
ROSE PLATE INSIDE

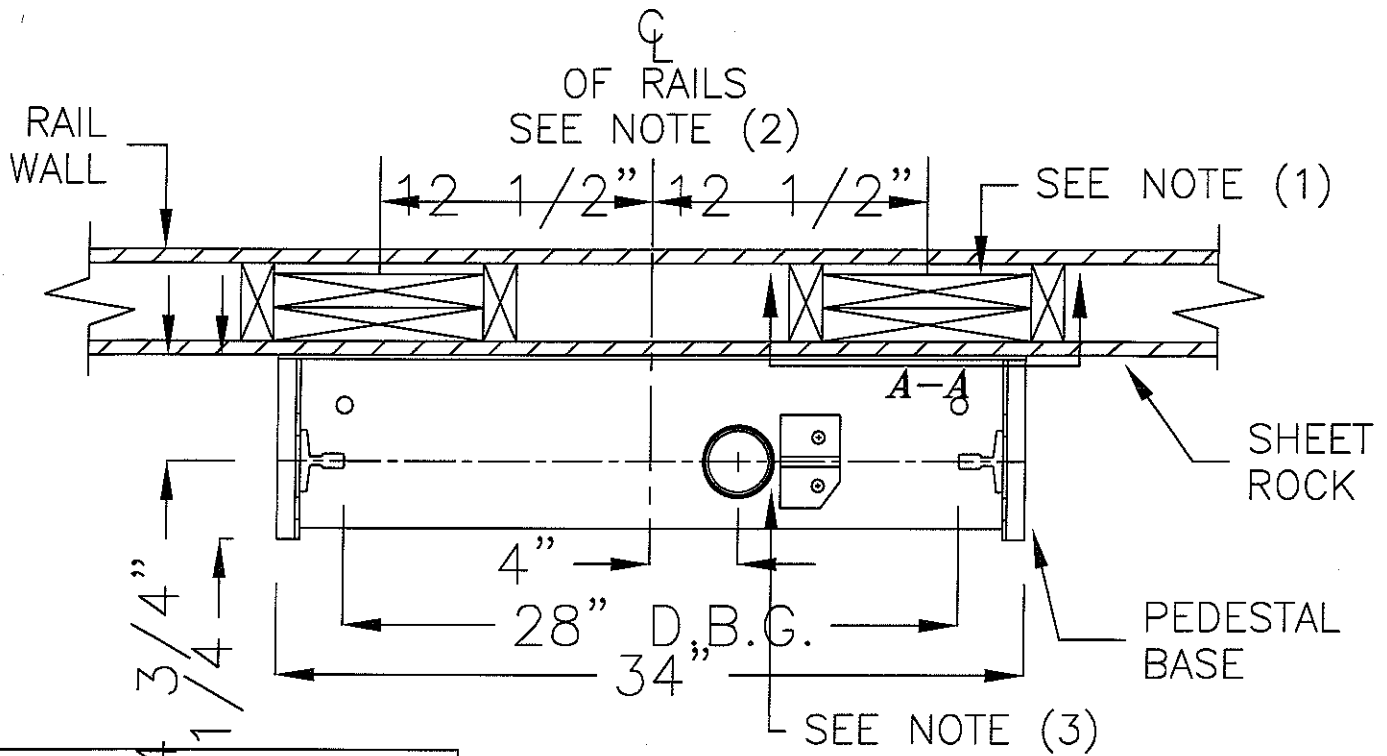
DHP 100

SWING OPTIONAL (RIGHT HAND SHOWN)
ALL DIMENSIONS ARE NOMINAL

NATIONAL WHEEL-O-VATOR

509 W. FRONT ST. ROANOKE, ILLINOIS 61561 800-551-9095

SCALE: NONE	DATE: 4-9-08	DRAWN BY: MD	DRAWING NUMBER: 1007
MODEL: CDP 1000	FIRE-RATING: 1 1/2 HR B LABEL	DOOR SIZE: 3'0" X 80 1/2"	
DOOR SWING: RIGHT HAND	INTERLOCK TYPE: ELECTRIC STRIKE	HANDLE TYPE: PDQ	
DOOR OPERATION:	NORTON DOOR CLOSER		NWOV SUP: EZ



R1

 R2

 RAIL REACTIONS

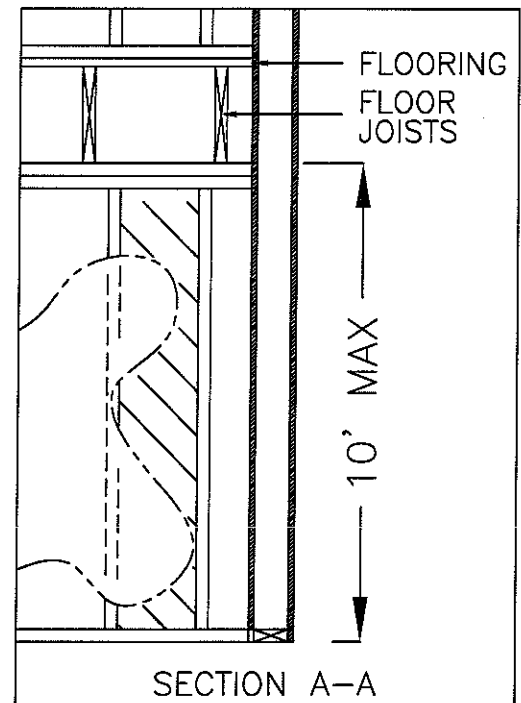
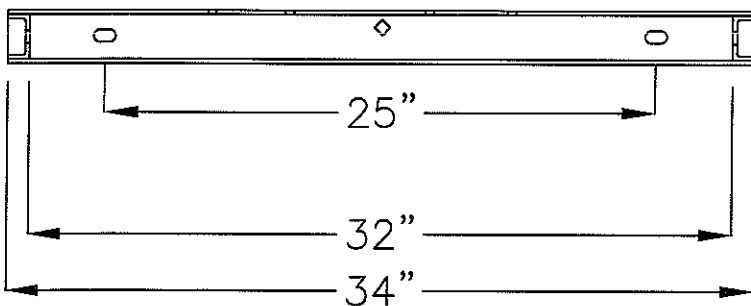
 BY CAPACITY

 (PER RAIL)

750#	950#
R1 = 150	R1 = 175
R2 = 400	R2 = 450

CONTRACTOR'S RESPONSIBILITY:
 PROVIDE ADEQUATE WALL SUPPORTS FOR T-RAIL FASTENINGS. VERTICAL INTERVALS NOT TO EXCEED 10'0" (SECTION A-A). COMPLY TO ALL PERTINENT BUILDING CODES FOR HOISTWAY CONSTRUCTION AND FIRE RATING.

RAIL BRACKET FRONT



NOTES:

(1) TWO 2X10's LAMINATED, SUPPORTED AND FASTENED BETWEEN TWO 2X4's RECESSED IN HOISTWAY WALL BEHIND THE SHEETROCK.

(2) RAIL CENTERLINE CAN BE LOCATED ON THE HOISTWAY OVERVIEW DRAWING.

(3) PEDESTAL CUP AND/OR DEAD END HITCH MAY NOT BE ON ALL MODELS. SUGGESTED BACKING SHOWN ABOVE TO ANCHOR ELEVATOR RAIL BRACKETS.

NATIONAL WHEEL-O-VATOR
 509 W. FRONT ST. ROANOKE, ILLINOIS 61581 800-551-9095
 TYPICAL T-RAIL BACKING REQUIREMENTS
 WOV 355 ELEVATOR WV-2021B
 SCALE: NONE DATE: 8-18-08 DRAWN BY: SLR DRAWING NUMBER: 605372
 DEALER: ADAPTIVE ENVIRONMENTS
 JOB: JEM/SUNNY BROOK GC



JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LABOR & ECONOMIC GROWTH
LANSING

KEITH W. COOLEY
DIRECTOR

October 21, 2008

To: Elevator Safety Board

From: C. W. Rogler

Subject: Variance for issuance of Synergy installation permits at Bloomfield Park

Request has been made by ThyssenKrupp for a variance to install four Synergy units at Bloomfield Park Building D, in Bloomfield Hills, Michigan.

Division Recommendation

The Elevator Safety Division recommends the Elevator Safety Board review the submitted permit applications with regards to the standing requirements for ThyssenKrupp Elevator's Synergy Unit before making a determination.

Providing for Michigan's Safety in the Built Environment

BUREAU OF CONSTRUCTION CODES
P.O. BOX 30254 • LANSING, MICHIGAN 48909
Telephone (517) 241-9337 • Fax (517) 241-6301
www.michigan.gov/dleg

DLEG is an equal opportunity employer/program.

Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities

Rogler, Cal (DLEG)

From: Myers, Cornell [cornell.myers@thyssenkrupp.com]

Sent: Thursday, October 09, 2008 9:21 AM

To: Rogler, Cal (DLEG)

Subject: Synergy Product Line for variance meeting

As per our conversation a couple of weeks ago. As you are aware we have permit requests in for the Bloomfield Park Elevators. These elevators are the same as the ones at the Lakeland Hospital project. As we are both aware the finals cannot be performed on the Bloomfield Park elevators until the Lakeland Hospital is complete, however, I do need the permits to begin this installation. This will be topic number one that I would like at the board.

Topic 2: I would like to introduce the paperwork for the Synergy L product. This product information is currently in the hands of the state. I would like some brief conversations on this equipment as well. Thanks

Cornell Myers
ThyssenKrupp Elevator
District Manager
35432 Industrial Road
Livonia, MI 48150
Cellular: (248) 798-6679
Phone: (734) 953-3734 Ext. 23
Fax: (734) 953-3788

Application for Elevator Installation Permit

176

Michigan Department of Labor & Economic Growth
Bureau of Construction Codes & Fire Safety
Elevator Safety Division
P.O. Box 30255, Lansing, MI 48909
517/241-9337

OFFICE USE ONLY	
STATE SERIAL NUMBER	48085
PERMIT NUMBER	62656
PERMIT APPROVED BY	DATE

FORMS AND BLUE PRINTS MUST BE SUBMITTED IN TRIPLICATE

Authority: 1987 PA 227 Completion: Mandatory Penalty: \$50.00	The Department of Labor & Economic Growth will not discriminate against any individual or group because of race, sex, religion, age, national origin, color, marital status, disability, or political beliefs. If you need help with reading, writing, hearing, etc., under the Americans with Disabilities Act, you may make your needs known to this agency.
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BILLING INFORMATION

ELEVATOR LOCATION (BUILDING NAME) Bloomfield Park Bldg. D		COUNTY Oakland	
LOCATION (ADDRESS) 1939 Telegraph Rd.		CITY Bloomfield Hills	ZIP CODE 48304
BILLING INFORMATION (OWNER OR DESIGNATED AGENT) - SAME -	BILLING ADDRESS "	CITY "	STATE "
TYPE OF DEVICE Passenger		MANUFACTURED BY ThyssenKrupp	MANUFACTURER'S NUMBER C-45759
TYPE OF CONTROL TAC50-04	CAPACITY 3500 LBS	RATED SPEED 350 FPM	RISE OF CAR 77 FT 8 IN
		NUMBER OF LANDINGS 7	

CAR

HOW OPERATED FROM CAR <input type="checkbox"/> HAND ROPE <input type="checkbox"/> CAR SWITCH <input type="checkbox"/> AUTO <input checked="" type="checkbox"/> PUSH BUTTON		FROM LANDING Pushbtn.	DESTINATION - ORIENTED ELEVATOR SYSTEM <input type="checkbox"/> YES <input type="checkbox"/> NO
SIZE OF PLATFORM (INSIDE) 2	NUMBER OF CAR ENTRANCES 2	SAFE EDGE <input type="checkbox"/> YES <input type="checkbox"/> NO	ELECTRIC EYE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
POWER OPERATED DOOR REOPENING DEVICE <input type="checkbox"/> PROXIMITY <input checked="" type="checkbox"/> INFRARED <input type="checkbox"/> OTHER		CAR DOORS OR GATES POWER OPERATED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
HOISTWAY DOORS ARE <input type="checkbox"/> SEQUENCE <input checked="" type="checkbox"/> SIMULTANEOUSLY		EMERGENCY EXITS <input checked="" type="checkbox"/> CAR TOP HINGED <input type="checkbox"/> CAR TOP REMOVABLE <input type="checkbox"/> SIDE PANEL	
EMERGENCY EXIT ELECTRIC CONTACT <input type="checkbox"/> YES <input type="checkbox"/> NO		TYPE OF CAR SAFETY DEVICE <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> OTHER	
POWER DOOR OPERATOR (MANUFACTURER'S NAME) ThyssenKrupp Elevator		EMERGENCY CALL <input checked="" type="checkbox"/> BELL <input checked="" type="checkbox"/> TELEPHONE <input type="checkbox"/> OTHER	

CABLES

NUMBER	HOISTING	GOVERNOR	COMPENSATION	DIAMETER OF SHEAVES	
7	10mm	3/8"		DEFLECTOR	COUNTERWEIGHT
MATERIAL	Warrington	Iron		17 3/4" 17 3/4"	
CONSTRUCTION	8X19	8X19		SLACK CABLE DEVICE LOCATION <input type="checkbox"/> CAR <input type="checkbox"/> MACHINE <input type="checkbox"/> NONE <input type="checkbox"/> OTHER	
ROPING <input checked="" type="checkbox"/> SINGLE WRAPPED 1 TO 1 <input type="checkbox"/> DOUBLE WRAPPED 1 TO 1 <input type="checkbox"/> SINGLE WRAPPED 2 TO 1 <input type="checkbox"/> DOUBLE WRAPPED 2 TO 1				FASTENINGS <input type="checkbox"/> TAPERED SOCKETS <input type="checkbox"/> CLIPS <input type="checkbox"/> WEDGE CLAMP	

MACHINE ROOM

LOCATION <input type="checkbox"/> OVERHEAD <input type="checkbox"/> BASEMENT <input type="checkbox"/> FIRST FLOOR <input type="checkbox"/> OTHER		SELF CLOSING SELF LOCKING DOOR PROVIDED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
MACHINE ROOM FULLY ENCLOSED N/A	MACHINE TYPE 1. <input checked="" type="checkbox"/> CABLE 3. <input type="checkbox"/> ROPED HYDRAULIC 5. <input type="checkbox"/> OTHER 2. <input type="checkbox"/> DIRECT PLUNGER HYDRAULIC 4. <input type="checkbox"/> HAND POWER	POWER 1. <input checked="" type="checkbox"/> ELECTRIC 2. <input type="checkbox"/> HAND POWER	
TYPE OF DRIVE Gearless Traction	TYPE OF BREAK Disk	TYPE OF BRAKE (RELEASED)	DIAMETER OF SHEAVES/SPROCKETS/PULLEYS DRUM _____ INCHES TRACTION _____ INCHES
TYPE OF GOVERNOR AND LOCATION	GOVERNOR TRIPPING SPEED 425 FPM	GOVERNOR OVERSPEED SWITCH <input type="checkbox"/> YES <input type="checkbox"/> NO	PHASE PROTECTION <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
H.P.	ELECTRIC MOTOR VOLTAGE 480V A.C. <input type="checkbox"/> D.C.	OPERATING DEVICE VOLTAGE 24V A.C. <input checked="" type="checkbox"/> D.C.	DIAMETER OF PLUNGER _____ INCHES
FULLY EXPOSED CYLINDER <input type="checkbox"/> YES <input type="checkbox"/> NO	CYLINDER PROTECTION TYPE	SHUTOFF VALVE LOCATION <input type="checkbox"/> PIT <input type="checkbox"/> MACHINE ROOM <input type="checkbox"/> OTHER	OVERSPEED VALVE <input type="checkbox"/> YES <input type="checkbox"/> NO

CONTRACTOR SIGNATURE

CONTRACTOR'S COMPANY NAME AND BRANCH OFFICE (CITY) ThyssenKrupp Elevator (Livonia)	CONTRACTOR LICENSE NUMBER 3355	PERMIT FEE 435.00
CONTRACTOR'S SIGNATURE [Signature]	DATE 9/19/2008	

Application for Elevator Installation Permit

176

Michigan Department of Labor & Economic Growth
Bureau of Construction Codes & Fire Safety
Elevator Safety Division
P.O. Box 30255, Lansing, MI 48909
517/241-9337

OFFICE USE ONLY	
STATE SERIAL NUMBER	48086
PERMIT NUMBER	62657
PERMIT APPROVED BY	DATE

FORMS AND BLUE PRINTS MUST BE SUBMITTED IN TRIPLICATE

Authority: 1987 PA 227 Completion: Mandatory Penalty: \$50.00	The Department of Labor & Economic Growth will not discriminate against any individual or group because of race, sex, religion, age, national origin, color, marital status, disability, or political beliefs. If you need help with reading, writing, hearing, etc., under the Americans with Disabilities Act, you may make your needs known to this agency.
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BILLING INFORMATION

ELEVATOR LOCATION (BUILDING NAME)		COUNTY	
Bloomfield Park Bldg. D		Oakland (63)	
LOCATION (ADDRESS)		CITY	ZIP CODE
1939 Telegraph Rd. Bloomfield Hills		Bloomfield Hills	48304
BILLING INFORMATION (OWNER OR DESIGNATED AGENT)	BILLING ADDRESS	CITY	STATE
-SAME-	"	"	"
TYPE OF DEVICE	MANUFACTURED BY	MANUFACTURER'S NUMBER	
Passenger	ThyssenKrupp	C-45760	
TYPE OF CONTROL	CAPACITY	RATED SPEED	RISE OF CAR
(VVVF) TACS004	3500 LBS	350 FPM	77 FT 8 IN
		NUMBER OF LANDINGS	
		7	

CAR

HOW OPERATED FROM CAR		FROM LANDING	DESTINATION - ORIENTED ELEVATOR SYSTEM
<input type="checkbox"/> HAND ROPE <input type="checkbox"/> CAR SWITCH <input type="checkbox"/> AUTO <input checked="" type="checkbox"/> PUSH BUTTON		Pushbtn	<input type="checkbox"/> YES <input type="checkbox"/> NO
SIZE OF PLATFORM (INSIDE)	NUMBER OF CAR ENTRANCES	SAFE EDGE	ELECTRIC EYE
	<input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
POWER OPERATED DOOR REOPENING DEVICE		CAR DOORS OR GATES POWER OPERATED	
<input type="checkbox"/> PROXIMITY <input checked="" type="checkbox"/> INFRARED <input type="checkbox"/> OTHER		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
HOISTWAY DOORS ARE		EMERGENCY EXITS	
<input type="checkbox"/> SEQUENCE <input checked="" type="checkbox"/> SIMULTANEOUSLY		<input checked="" type="checkbox"/> CAR TOP HINGED <input type="checkbox"/> CAR TOP REMOVABLE <input type="checkbox"/> SIDE PANEL	
EMERGENCY EXIT ELECTRIC CONTACT		TYPE OF CAR SAFETY DEVICE	
<input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> OTHER	
POWER DOOR OPERATOR (MANUFACTURER'S NAME)		EMERGENCY CALL	
		<input checked="" type="checkbox"/> BELL <input checked="" type="checkbox"/> TELEPHONE <input type="checkbox"/> OTHER	

CABLES

NUMBER	HOISTING	GOVERNOR	COMPENSATION	DIAMETER OF SHEAVES
7	10mm	3/8"		DEFLECTOR
	Warrington	IRON		CAR
	8x19	8x19		COUNTERWEIGHT
ROPE				SLACK CABLE DEVICE LOCATION
<input checked="" type="checkbox"/> SINGLE WRAPPED 1 TO 1 <input type="checkbox"/> DOUBLE WRAPPED 1 TO 1 <input checked="" type="checkbox"/> SINGLE WRAPPED 2 TO 1 <input type="checkbox"/> DOUBLE WRAPPED 2 TO 1				<input type="checkbox"/> CAR <input type="checkbox"/> MACHINE <input type="checkbox"/> NONE <input type="checkbox"/> OTHER
				FASTENINGS
				<input type="checkbox"/> TAPERED SOCKETS <input type="checkbox"/> CLIPS <input type="checkbox"/> WEDGE CLAMP

MACHINE ROOM

LOCATION		SELF CLOSING SELF LOCKING DOOR PROVIDED	
<input type="checkbox"/> OVERHEAD <input type="checkbox"/> BASEMENT <input type="checkbox"/> FIRST FLOOR <input type="checkbox"/> OTHER		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
MACHINE ROOM FULLY ENCLOSED	MACHINE TYPE	POWER	
N/A	1. <input checked="" type="checkbox"/> CABLE 3. <input type="checkbox"/> ROPED HYDRAULIC 5. <input type="checkbox"/> OTHER	1. <input checked="" type="checkbox"/> ELECTRIC	
<input type="checkbox"/> YES <input type="checkbox"/> NO	2. <input type="checkbox"/> DIRECT PLUNGER HYDRAULIC 4. <input type="checkbox"/> HAND POWER	2. <input type="checkbox"/> HAND POWER	
TYPE OF DRIVE	TYPE OF BREAK	TYPE OF BRAKE (RELEASED)	DIAMETER OF SHEAVES/SPROCKETS/PULLEYS
Gearless Traction	Disk		DRUM _____ INCHES TRACTION _____ INCHES
TYPE OF GOVERNOR AND LOCATION	GOVERNOR TRIPPING SPEED	GOVERNOR OVERSPEED SWITCH	PHASE PROTECTION
	425 FPM	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
H.P.	ELECTRIC MOTOR VOLTAGE	OPERATING DEVICE VOLTAGE	DIAMETER OF PLUNGER
	480V <input checked="" type="checkbox"/> A.C. <input type="checkbox"/> D.C.	24V <input type="checkbox"/> A.C. <input checked="" type="checkbox"/> D.C.	_____ INCHES
FULLY EXPOSED CYLINDER	CYLINDER PROTECTION TYPE	SHUTOFF VALVE LOCATION	OVERSPEED VALVE
<input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> PIT <input type="checkbox"/> MACHINE ROOM <input type="checkbox"/> OTHER	<input type="checkbox"/> YES <input type="checkbox"/> NO

CONTRACTOR SIGNATURE

CONTRACTOR'S COMPANY NAME AND BRANCH OFFICE (CITY)	CONTRACTOR LICENSE NUMBER	PERMIT FEE
ThyssenKrupp Elevator (Livonia)	3355	\$ 435.00
CONTRACTOR'S SIGNATURE	DATE	
(Signature)	9/19/2008	

Application for Elevator Installation Permit

Michigan Department of Labor & Economic Growth

Bureau of Construction Codes & Fire Safety

Elevator Safety Division

P.O. Box 30255, Lansing, MI 48909

517/241-9337

FORMS AND BLUE PRINTS MUST BE SUBMITTED IN TRIPLICATE

OFFICE USE ONLY	
STATE SERIAL NUMBER	48087
PERMIT NUMBER	62658
PERMIT APPROVED BY	DATE

Authority: 1967 PA 227 Completion: Mandatory Penalty: \$50.00	The Department of Labor & Economic Growth will not discriminate against any individual or group because of race, sex, religion, age, national origin, color, marital status, disability, or political beliefs. If you need help with reading, writing, hearing, etc., under the Americans with Disabilities Act, you may make your needs known to this agency.
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BILLING INFORMATION

ELEVATOR LOCATION (BUILDING NAME)		COUNTY	
Bloomfield Park Bldg. D		Oakland (63)	
LOCATION (ADDRESS)		CITY	ZIP CODE
1939 Telegraph Rd.		Bloomfield Hills	48304
BILLING INFORMATION (OWNER OR DESIGNATED AGENT)	BILLING ADDRESS	CITY	STATE
- Same -	"	"	"
TYPE OF DEVICE	MANUFACTURED BY	MANUFACTURER'S NUMBER	
Passenger	ThyssenKrupp	C-15761	
TYPE OF CONTROL	CAPACITY	RATED SPEED	RISE OF CAR
(VVVF) TAC5004	3500 LBS	350 FPM	83 FT 9 IN
		NUMBER OF LANDINGS	
		8	

CAR

HOW OPERATED FROM CAR		FROM LANDING	DESTINATION - ORIENTED ELEVATOR SYSTEM
<input type="checkbox"/> HAND ROPE <input type="checkbox"/> CAR SWITCH <input type="checkbox"/> AUTO <input checked="" type="checkbox"/> PUSH BUTTON		Push btn.	<input type="checkbox"/> YES <input type="checkbox"/> NO
SIZE OF PLATFORM (INSIDE)	NUMBER OF CAR ENTRANCES	SAFE EDGE	ELECTRIC EYE
	<input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
POWER OPERATED DOOR REOPENING DEVICE		CAR DOORS OR GATES POWER OPERATED	
<input type="checkbox"/> PROXIMITY <input checked="" type="checkbox"/> INFRARED <input type="checkbox"/> OTHER		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
HOISTWAY DOORS ARE		EMERGENCY EXITS	
<input type="checkbox"/> SEQUENCE <input checked="" type="checkbox"/> SIMULTANEOUSLY		<input checked="" type="checkbox"/> CAR TOP HINGED <input type="checkbox"/> CAR TOP REMOVABLE <input type="checkbox"/> SIDE PANEL	
EMERGENCY EXIT ELECTRIC CONTACT		TYPE OF CAR SAFETY DEVICE	
<input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> OTHER	
POWER DOOR OPERATOR (MANUFACTURER'S NAME)		EMERGENCY CALL	
ThyssenKrupp Elevator		<input type="checkbox"/> BELL <input checked="" type="checkbox"/> TELEPHONE <input type="checkbox"/> OTHER	

CABLES	HOISTING	GOVERNOR	COMPENSATION	DIAMETER OF SHEAVES
NUMBER	7	1		DEFLECTOR
DIAMETER	10mm	3/8"		CAR 17 3/4" COUNTERWEIGHT 17 3/4"
MATERIAL	Warrington	IRON		SLACK CABLE DEVICE LOCATION
CONSTRUCTION	8X19	8X19		<input type="checkbox"/> CAR <input type="checkbox"/> MACHINE <input type="checkbox"/> NONE <input type="checkbox"/> OTHER
ROPING				FASTENINGS
<input type="checkbox"/> SINGLE WRAPPED 1 TO 1 <input type="checkbox"/> DOUBLE WRAPPED 1 TO 1 <input checked="" type="checkbox"/> SINGLE WRAPPED 2 TO 1 <input type="checkbox"/> DOUBLE WRAPPED 2 TO 1				<input type="checkbox"/> TAPERED SOCKETS <input type="checkbox"/> CLIPS <input type="checkbox"/> WEDGE CLAMP

MACHINE ROOM

LOCATION		SELF CLOSING SELF LOCKING DOOR PROVIDED	
<input type="checkbox"/> OVERHEAD <input type="checkbox"/> BASEMENT <input type="checkbox"/> FIRST FLOOR <input type="checkbox"/> OTHER		<input type="checkbox"/> YES <input type="checkbox"/> NO	
MACHINE ROOM FULLY ENCLOSED	MACHINE TYPE	POWER	
N/A	<input checked="" type="checkbox"/> CABLE <input type="checkbox"/> DIRECT PLUNGER HYDRAULIC <input type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> ELECTRIC <input type="checkbox"/> HAND POWER <input type="checkbox"/> YES <input type="checkbox"/> NO	
TYPE OF DRIVE	TYPE OF BREAK	TYPE OF BRAKE (RELEASED)	DIAMETER OF SHEAVES/SPOCKETS/PULLEYS
Gearless Traction			DRUM _____ INCHES TRACTION _____ INCHES
TYPE OF GOVERNOR AND LOCATION	GOVERNOR TRIPPING SPEED	GOVERNOR OVERSPEED SWITCH	PHASE PROTECTION
	425 FPM	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
H.P.	ELECTRIC MOTOR VOLTAGE	OPERATING DEVICE VOLTAGE	DIAMETER OF PLUNGER
	480V A.C. <input type="checkbox"/> D.C.	24V A.C. <input checked="" type="checkbox"/> D.C.	_____ INCHES
FULLY EXPOSED CYLINDER	CYLINDER PROTECTION TYPE	SHUTOFF VALVE LOCATION	OVERSPEED VALVE
<input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> PIT <input type="checkbox"/> MACHINE ROOM <input type="checkbox"/> OTHER	<input type="checkbox"/> YES <input type="checkbox"/> NO

CONTRACTOR SIGNATURE

CONTRACTOR'S COMPANY NAME AND BRANCH OFFICE (CITY)	CONTRACTOR LICENSE NUMBER	PERMIT FEE
ThyssenKrupp Elevator (Livonia)	3355	\$460.00
CONTRACTOR'S SIGNATURE	DATE	
Rm (604)	9/19/2008	

Application for Elevator Installation Permit

176

Michigan Department of Labor & Economic Growth
Bureau of Construction Codes & Fire Safety
Elevator Safety Division
P.O. Box 30255, Lansing, MI 48909
517/241-9337

OFFICE USE ONLY	
STATE SERIAL NUMBER	48088
PERMIT NUMBER	62659
PERMIT APPROVED BY	DATE

FORMS AND BLUE PRINTS MUST BE SUBMITTED IN TRIPLICATE

Authority: 1987 PA 227 Completion: Mandatory Penalty: \$50.00	The Department of Labor & Economic Growth will not discriminate against any individual or group because of race, sex, religion, age, national origin, color, marital status, disability, or political beliefs. If you need help with reading, writing, hearing, etc., under the Americans with Disabilities Act, you may make your needs known to this agency.
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LOCATION (ADDRESS)	CITY	ZIP CODE	
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BILLING INFORMATION (OWNER OR DESIGNATED AGENT)	BILLING ADDRESS	CITY	STATE
- SAME -	"	"	"
TYPE OF DEVICE	MANUFACTURED BY	MANUFACTURER'S NUMBER	
Passenger	ThyssenKrupp	C-45762	
TYPE OF CONTROL	CAPACITY	RATED SPEED	RISE OF CAR
(VVVF)	3300 LBS	350 FPM	83 FT 9 IN
TAC5004		NUMBER OF LANDINGS	
		8	

CAR

HOW OPERATED FROM CAR		FROM LANDING	DESTINATION - ORIENTED ELEVATOR SYSTEM
<input type="checkbox"/> HAND ROPE <input type="checkbox"/> CAR SWITCH <input type="checkbox"/> AUTO <input checked="" type="checkbox"/> PUSH BUTTON		Pushbtn.	<input type="checkbox"/> YES <input type="checkbox"/> NO
SIZE OF PLATFORM (INSIDE)	NUMBER OF CAR ENTRANCES	SAFE EDGE	ELECTRIC EYE
	<input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
POWER OPERATED DOOR REOPENING DEVICE		CAR DOORS OR GATES POWER OPERATED	
<input type="checkbox"/> PROXIMITY <input checked="" type="checkbox"/> INFRARED <input type="checkbox"/> OTHER		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
HOISTWAY DOORS ARE		EMERGENCY EXITS	
<input type="checkbox"/> SEQUENCE <input checked="" type="checkbox"/> SIMULTANEOUSLY		<input checked="" type="checkbox"/> CAR TOP HINGED <input type="checkbox"/> CAR TOP REMOVABLE <input type="checkbox"/> SIDE PANEL	
EMERGENCY EXIT ELECTRIC CONTACT		TYPE OF CAR SAFETY DEVICE	
<input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> OTHER	
POWER DOOR OPERATOR (MANUFACTURER'S NAME)		EMERGENCY CALL	
ThyssenKrupp Elevator		<input checked="" type="checkbox"/> BELL <input checked="" type="checkbox"/> TELEPHONE <input type="checkbox"/> OTHER	

CABLES

NUMBER	HOISTING	GOVERNOR	COMPENSATION	DIAMETER OF SHEAVES
	7	1		DEFLECTOR
DIAMETER	10mm	3/8"		CAR
MATERIAL	Warrington	IRON		COUNTERWEIGHT
CONSTRUCTION	8 X 19	8 X 19		17 3/4" 17 3/4"
ROPING				SLACK CABLE DEVICE LOCATION
<input type="checkbox"/> SINGLE WRAPPED 1 TO 1 <input type="checkbox"/> DOUBLE WRAPPED 1 TO 1 <input checked="" type="checkbox"/> SINGLE WRAPPED 2 TO 1 <input type="checkbox"/> DOUBLE WRAPPED 2 TO 1				<input type="checkbox"/> CAR <input type="checkbox"/> MACHINE <input type="checkbox"/> NONE <input type="checkbox"/> OTHER
				FASTENINGS
				<input type="checkbox"/> TAPERED SOCKETS <input type="checkbox"/> CLIPS <input type="checkbox"/> WEDGE CLAMP

MACHINE ROOM

LOCATION		SELF CLOSING SELF LOCKING DOOR PROVIDED	
<input type="checkbox"/> OVERHEAD <input type="checkbox"/> BASEMENT <input type="checkbox"/> FIRST FLOOR <input type="checkbox"/> OTHER		<input type="checkbox"/> YES <input type="checkbox"/> NO	
MACHINE ROOM FULLY ENCLOSED	MACHINE TYPE	POWER	
N/A	<input checked="" type="checkbox"/> CABLE <input type="checkbox"/> DIRECT PLUNGER HYDRAULIC <input type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> ELECTRIC <input type="checkbox"/> HAND POWER <input type="checkbox"/> YES <input type="checkbox"/> NO	
TYPE OF DRIVE	TYPE OF BREAK	TYPE OF BRAKE (RELEASED)	DIAMETER OF SHEAVES/SPROCKETS/PULLEYS
Gearless Traction			DRUM INCHES TRACTION INCHES
TYPE OF GOVERNOR AND LOCATION	GOVERNOR TRIPPING SPEED	GOVERNOR OVERSPEED SWITCH	PHASE PROTECTION
	425 FPM	<input type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
H.P.	ELECTRIC MOTOR VOLTAGE	OPERATING DEVICE VOLTAGE	DIAMETER OF PLUNGER
	480V A.C. <input type="checkbox"/> D.C.	24V A.C. <input checked="" type="checkbox"/> D.C.	INCHES
FULLY EXPOSED CYLINDER	CYLINDER PROTECTION TYPE	SHUTOFF VALVE LOCATION	OVERSPEED VALVE
<input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> PIT <input type="checkbox"/> MACHINE ROOM <input type="checkbox"/> OTHER	<input type="checkbox"/> YES <input type="checkbox"/> NO

CONTRACTOR SIGNATURE

CONTRACTOR'S COMPANY NAME AND BRANCH OFFICE (CITY)	CONTRACTOR LICENSE NUMBER	PERMIT FEE
ThyssenKrupp Elevator (Livonia)	3355	\$460.00
CONTRACTOR'S SIGNATURE	DATE	
R. K. [Signature]	9/19/2008	

Elevator # 1 & 2

TRACTION ELEVATOR CONTRACT DATA

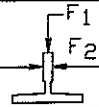
MAX. BRACKET SPACING		CWT. INTERMEDIATE TIE BRACKET	
CAR	CWT.	SPACING	QTY.
16'-0"	16'-0"	> 12'-0"	1
		> 14'-0"	2

ELEVATOR NUMBER	1 & 2
TYPE	PASSENGER
CLASS	DESIGNED FOR CLASS "A" FREIGHT LOADING
CAPACITY	3,500 LBS.
MAXIMUM UNIT LOAD	875 LBS.
MAXIMUM AXLE LOAD	875 LBS.
MAXIMUM SUSTAINING LOAD	3,500 LBS.
SPEED	350 F.P.M.
OPERATION	TAC50-04
STOPS	7, IN LINE
HOISTWAY ENTRANCES	CENTER OPENING (PWD.)
CAR DOOR	CENTER OPENING (PWD.)
STILE	F6.5 x 6.05
CROSSHEAD	F10 x 13.2
SAFETY PLANK	F10 x 9.45
CAR GUIDE TYPE	ROLLER
CAR SAFETY	FLEX CLAMP
GOVERNOR	CAR
MACHINE	DAF270M W/ ROPE GRIPPER
DRIVE SHEAVE DIAMETER	17.32 INCH
ISOLATION	SPECIAL
FULL LOAD MASS	13,705 LBS.

CONTROL	VVVF
POWER SUPPLY	480 V. 3 PH. 60 CYC.
HOIST ROPE (PREFORMED)	(7) 10 mm - DRAKO 250-T 8 x 19 WARRINGTON - IWRC (218'-0" LONG EACH)
GOVERNOR ROPE (PREFORMED)	(1) 3/8 IN. 8 x 19 IRON (235'-0" LONG EACH)
CAR BUFFER TYPE	(1) OIL
CAR BUFFER STROKE	8 1/2 INCH
CWT. BUFFER TYPE	(1) OIL
CWT. BUFFER STROKE	8 1/2 INCH
CWT. STILE LENGTH	9'-0"
CWT. GUIDE TYPE	ROLLER
CWT. FILLER TYPE	(71) NO. 121455
TOTAL FILLER WEIGHT	5,112 LBS.
TOTAL CWT. WEIGHT	(50 %) 5,727 LBS.
TOTAL CAR WEIGHT	3,934 LBS.
EST. CAB WEIGHT WITH DOOR OPERATOR CAB TYPE - (TKS)	1,720 LBS.
MACHINE WEIGHT	1,630 LBS.
CAR GUIDE RAILS	15 LBS./FT.
CWT. GUIDE RAILS	C12 (Ω)

THE FOLLOWING CONDITIONS MUST BE MET BEFORE INSTALLATION IS COMPLETED, AND ARE NOT INCLUDED IN THE ELEVATOR CONTRACT:

1. A PLUMB, PROPERLY-VENTILATED HOISTWAY (ACCORDING TO CODE AND SIZES SHOWN).
2. ADEQUATE SUPPORT FOR MACHINE BEAMS, GUIDE RAIL BRACKETS, AND BUFFERS (FOR REACTIONS SHOWN).
3. HOISTWAY BARRICADES (ALL CUTTING AND PATCHING TO INSTALL HOISTWAY ENTRANCES, SILLS, AND HALL FIXTURES).
4. PIT LIGHTS AND SWITCH, CONVENIENCE OUTLETS OF THE GFCI TYPE PER NEC, PIT LADDER PER CAR (ACCORDING TO CODE). NOTE: MUST BE CLEAR OF ALL ELEVATOR EQUIPMENT.
5. SEPARATE 120 VOLT, 15 AMP. BRANCH CIRCUITS, ALONG WITH TELEPHONE CIRCUIT WHEN REQUIRED, TO TERMINALS OF EACH REQUIRED CONTROLLER (AS LOCATED ON PLAN VIEW) FOR THE FOLLOWING:
 - CAR LIGHT AND ALARM CIRCUIT WITH RECEPTACLES OF THE GFCI TYPE PER NEC
 - GROUP CONTROL WHEN REQUIREDNOTE: IF STANDBY POWER IS SUPPLIED TO THE ELEVATOR, GROUP CONTROL CIRCUIT MUST BE STANDBY POWER BACKED.
6. BRANCH CIRCUIT CONDUCTOR SIZING, MATERIALS, AND INSULATION (INCLUDING BRANCH CIRCUIT OVERCURRENT PROTECTIVE DEVICE) TO COMPLY WITH ALL LOCAL ELECTRICAL CODES (SEE "ELECTRICAL POWER REQUIREMENTS").
NOTE: ALSO, A FOURTH WIRE OF SAME SIZE AS THREE PHASE WIRES IS REQUIRED FOR GROUNDING PURPOSES TO MINIMIZE ELECTRICAL NOISE INTERFERENCE. THE GROUNDING WIRE MUST BE CONNECTED TO THE BUILDINGS ELECTRICAL SYSTEMS GROUND.
- NOTE: IF STANDBY POWER IS REQUIRED, SEE "ELEVATOR STANDBY POWER OPERATION".
7. AN ENCLOSED CONTROLLER ROOM AREA (ACCORDING TO CODE), WITH ADEQUATE LIGHT, HEAT, VENTILATION (MIN. 50° F., MAX. 90° F. WITH NON-CONDENSING HUMIDITY OF 10-90%), AND SEALED CONCRETE FLOOR SLAB SURFACE.
NOTE: MUST PROVIDE ADEQUATE DOOR SIZE TO ALLOW INSTALLATION OF EQUIPMENT - OR LEAVE WALL OUT UNTIL EQUIPMENT IS IN PLACE.
NOTE: MACHINE BEAM DESIGN (PER ASME A17.1).
8. ENTRANCE DRYWALLS WITH LINTELS, MUST BE PROVIDED AFTER ENTRANCE FRAMES ARE SET - OR LEAVE A ROUGH OPENING 1'-3" WIDER AND 1'-3" HIGHER THAN THE FRAME OPENING. FOLLOW INSTALLATION PROCEDURES FOR FRAME TO WALL INTERFACE TO MAINTAIN LABELED CONSTRUCTION. FILL IN AROUND FRAMES AFTER THE FRAMES ARE SET.
9. POCKETS IN CORRIDOR WALL (PER FIXTURE DRAWINGS) FOR HALL FIXTURES.
NOTE: MUST BE LOCATED AS DIRECTED BY ELEVATOR CONTRACTOR.
10. SMOKE SENSORS (AS REQUIRED).
11. CONDUIT AND WIRING FROM HOISTWAY TO ELEVATOR MONITORING PANELS (FOR SECURITY, LIFE SAFETY, OR FIRE REQUIREMENTS).

RAIL FORCES		F ₁	F ₂
	LOADING OR UNLOADING	455 LBS.	320 LBS.
MAXIMUM VERTICAL FORCE ON EACH GUIDE RAIL DUE TO SAFETY APPLICATION.		CAR	
		7,580 LBS.	

NOTE A: ALL REACTIONS INCLUDE ALLOWANCE FOR IMPACT.

NOTE B: THYSSENKRUPP ELEVATOR TO BE NOTIFIED OF ANY CHANGE TO ELEVATOR HOISTWAY OR MACHINE ROOM DESIGN PRIOR TO FABRICATION OF ELEVATOR EQUIPMENT.

NOTE C: ELEVATOR DESIGN AND FABRICATION BASED ON ESTIMATED CAB WEIGHT SHOWN. LAYOUT APPROVAL WILL BE CONSTRUED AS FINAL CAB WEIGHT, UNLESS OTHERWISE NOTIFIED.

7/25/08	A	REVISED ROUGH OPENING	RES
DATE	SYM.	REVISION	BY
			CHKD.

DO NOT SCALE THIS DRAWING

ELEVATOR CONTRACTOR	CONTRACT NUMBER
THYSSENKRUPP ELEVATOR COMPANY	032C-Y5759-60
DETROIT, MICHIGAN	
FOR: BLOOMFIELD PARK BUILDING D	

ADDRESS: 1939 TELEGRAPH ROAD
CITY: BLOOMFIELD HILLS, MI 48304
ARCHITECT:
GENERAL CONTRACTOR: CLARK CONSTRUCTION

THIS DRAWING AND ALL INFORMATION THEREON IS THE PROPRIETARY PROPERTY OF THYSSENKRUPP ELEVATOR AND MUST NOT BE MADE PUBLIC OR COPIED. THIS DRAWING IS LOANED SUBJECT TO RETURN ON DEMAND AND IS NOT TO BE USED DIRECTLY OR INDIRECTLY, IN ANY MANNER DETRIMENTAL TO THE INTEREST OF THYSSENKRUPP ELEVATOR.

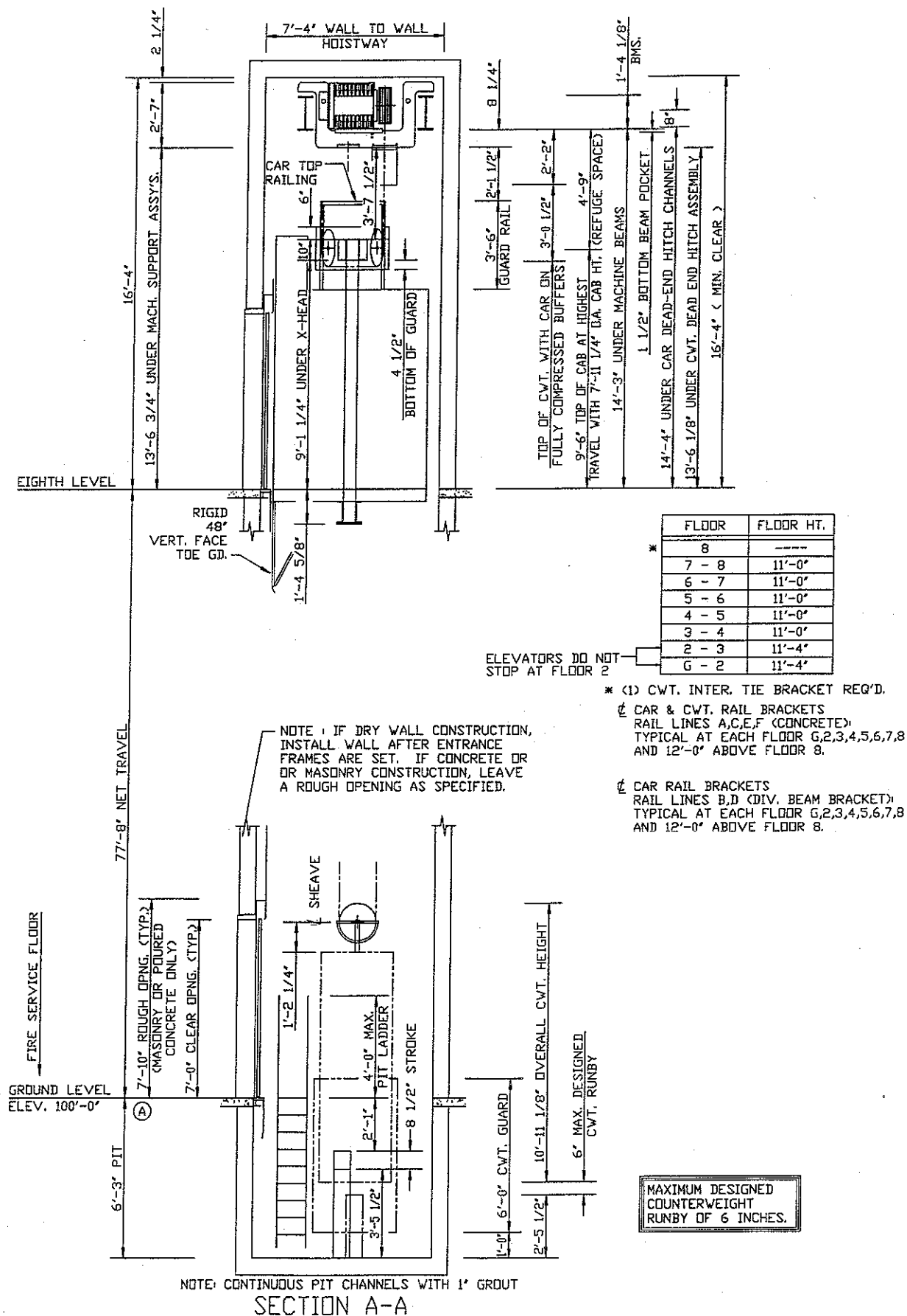


ThyssenKrupp Elevator

FINAL
7/25/08

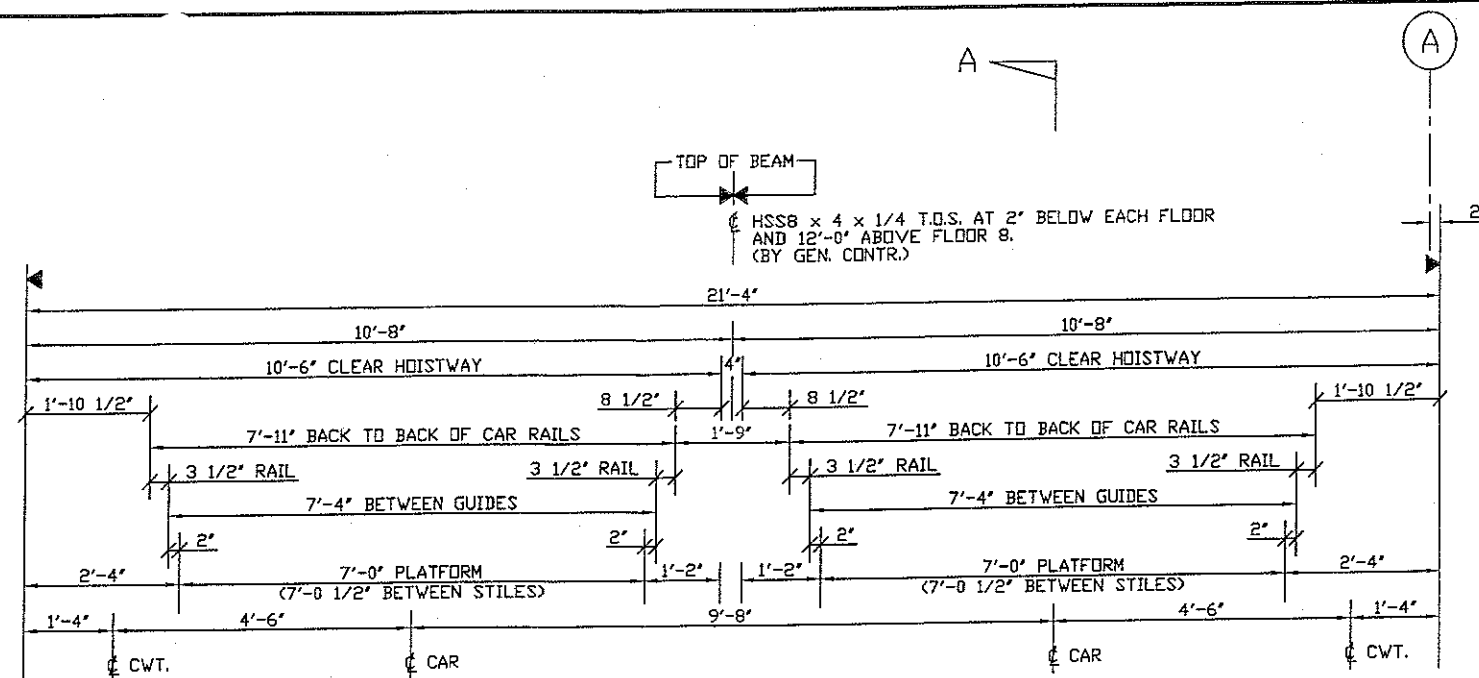
GERMANTOWN, TN.

DRAWN	DATE	CHKD.	JOB NUMBER	REV.	SHEET NO.
RHL	05-20 2008		C-Y5759-60	A	1 OF 4

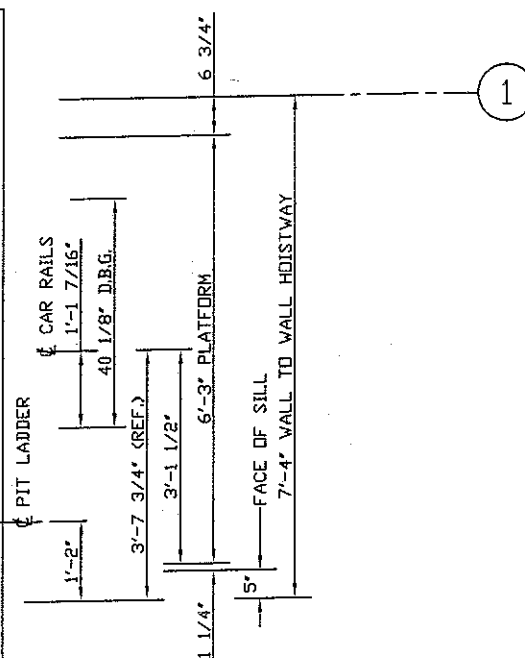
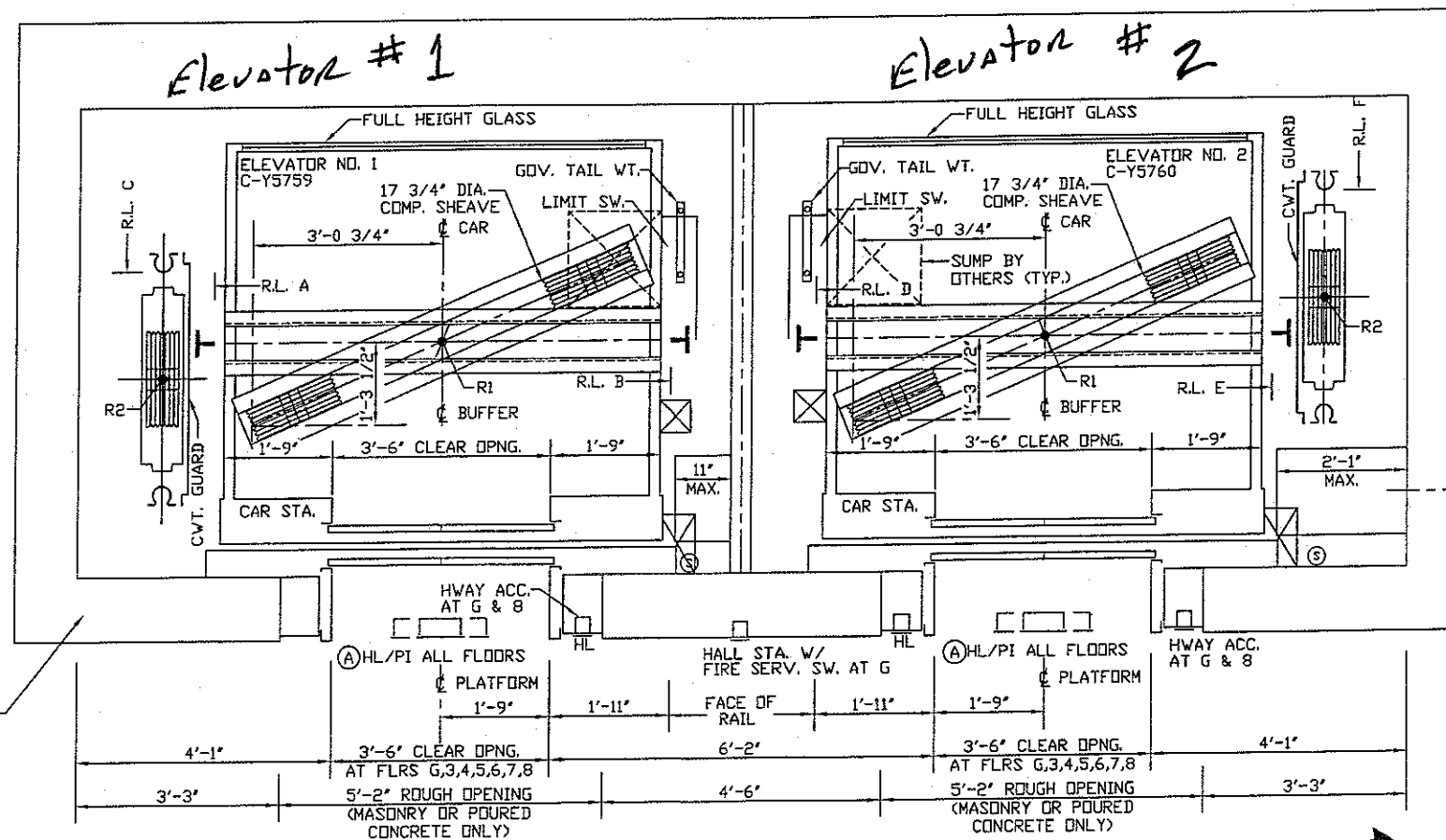
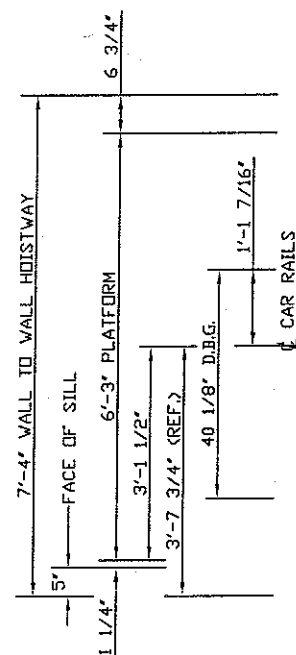


SYNERGY H FAST-TRAC WEIGHTS	
SLING WEIGHT (SYNERGY X-HL ASSEMBLY, STILES, SAFETY DEVICE, SAFETY CHANNELS & GUIDES)	1,605 LBS.
MISCELLANEOUS WEIGHT (CRIST MOTOR, SAFETY CANYON & TEMPORARY PLATFORM)	200 LBS.
TOTAL FAST-TRAC SUSPENDED LOAD	1,805 LBS.

SYNERGY H CONSTRUCTION WEIGHTS	
SLING WEIGHT (SYNERGY X-HL ASSEMBLY, STILES, SAFETY DEVICE, SAFETY CHANNELS & GUIDES)	1,605 LBS.
FACTORY PLATFORM (INCLUDES BRACE ROBS)	342 LBS.
MISCELLANEOUS (MECHANIC, HELPERS, TOOLS & EQUIPMENT)	1,000 LBS.
TOTAL TEMPORARY CWT. WT. REQUIRED	2,947 LBS.
CWT. FRAME WEIGHT (FRAME, SHES, SHACKLES, SHEAVE, SAFETY, ETC)	615 LBS.
TEMPORARY FILLER WT.	2,332 LBS.
TEMPORARY FILLER QTY	32



► = RAIL BRACKET MOUNTING SURFACE
R.L. = RAIL LINE
HL = HALL LANTERN



NOTE: IF DRYWALL CONSTRUCTION, INSTALL WALL AFTER
ENTRANCE FRAMES ARE SET. IF CONCRETE OR MASONRY
CONSTRUCTION, LEAVE ROUGH OPENING AS SPECIFIED.

BUFFER REACTIONS	
R1	32,200 LBS.
R2	24,950 LBS.

PLAN OF HOISTWAY NORTHWEST ELEVATORS

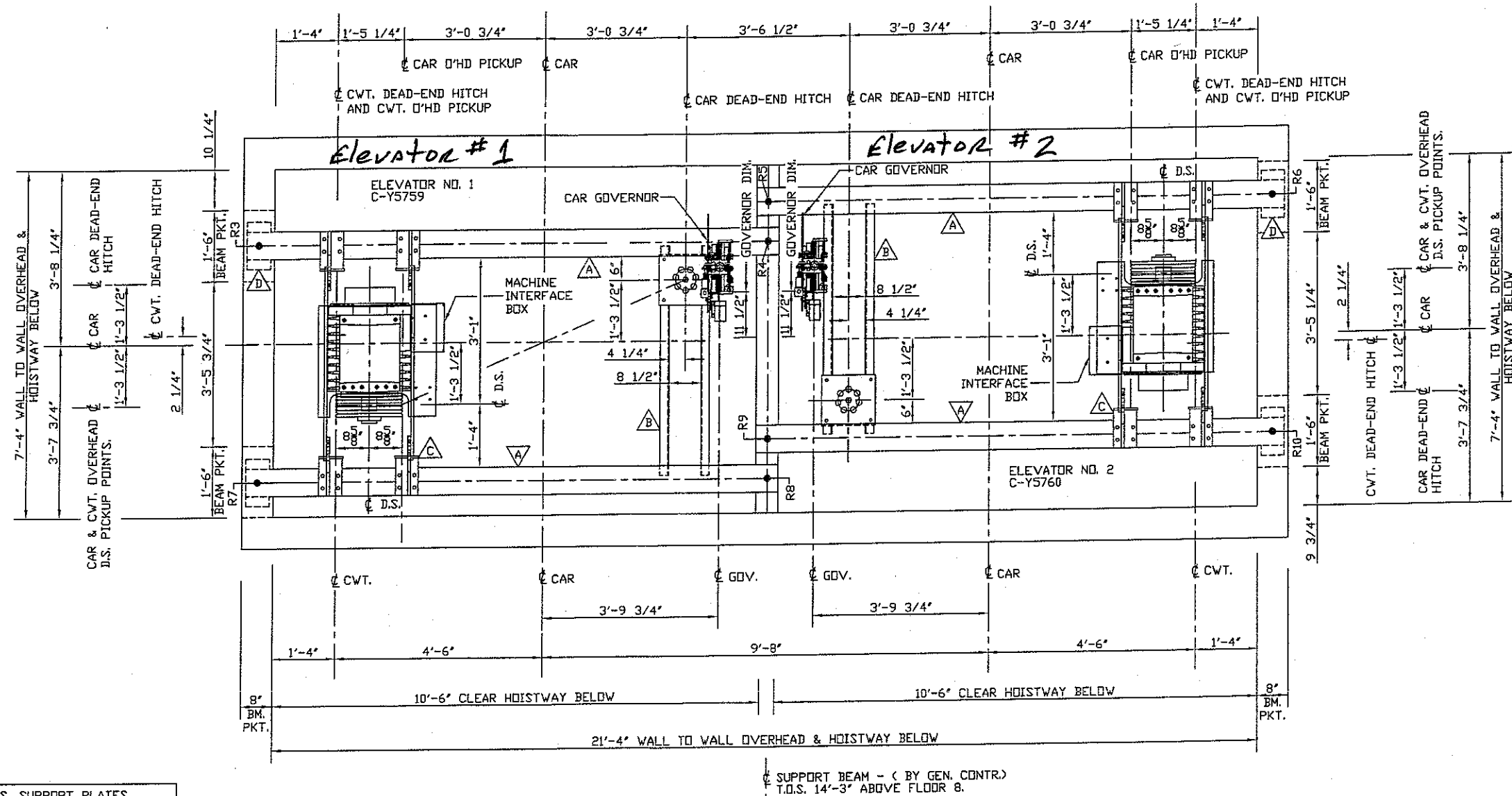
DATE	SYM.	REVISION	BY	CHKD.
7/25/08	A	HL/PI ADDED	RES	

FOR: BLOOMFIELD PARK BUILDING D

THIS DRAWING AND ALL INFORMATION THEREON IS THE PROPRIETARY PROPERTY OF THYSSENKRUPP ELEVATOR AND MUST NOT BE MADE PUBLIC OR COPIED. THIS DRAWING IS LOANED SUBJECT TO RETURN ON DEMAND AND IS NOT TO BE USED, DIRECTLY OR INDIRECTLY, IN ANY WAY DETRIMENTAL TO THE INTEREST OF THYSSENKRUPP ELEVATOR.

DO NOT SCALE THIS DRAWING

ThyssenKrupp Elevator		GERMANTOWN, TN.	
DRAWN	DATE	CHKD.	JOB NUMBER
RHL	05-20 2008		C-Y5759-60
REV.	SHEET NO.		
A	2 OF 4		



OVERHEAD REACTIONS (LBS.)	
R3	8,650
R4	7,500
R5	3,950
R6	10,350
R7	10,350
R8	3,950
R9	7,500
R10	8,650

OVERHEAD BEAMS, SUPPORT PLATES, AND BEARING PLATES		
QTY.	MARK	DESCRIPTION
4	A	W16 x 45 x 11'-6" LONG
4	B	C8 x 11.5 x 5'-6 1/4" LONG
2	C	MACHINE SUPPORT ASSEMBLY
4	D	6' x 1'-0" x 3/4" STEEL PLATE

PLAN OF OVERHEAD NORTHWEST ELEVATORS

DATE	SYM.	REVISION	BY	CHKD.
7/28/08	A	N.C.T.S.	RES	

FOR: BLOOMFIELD PARK BUILDING D

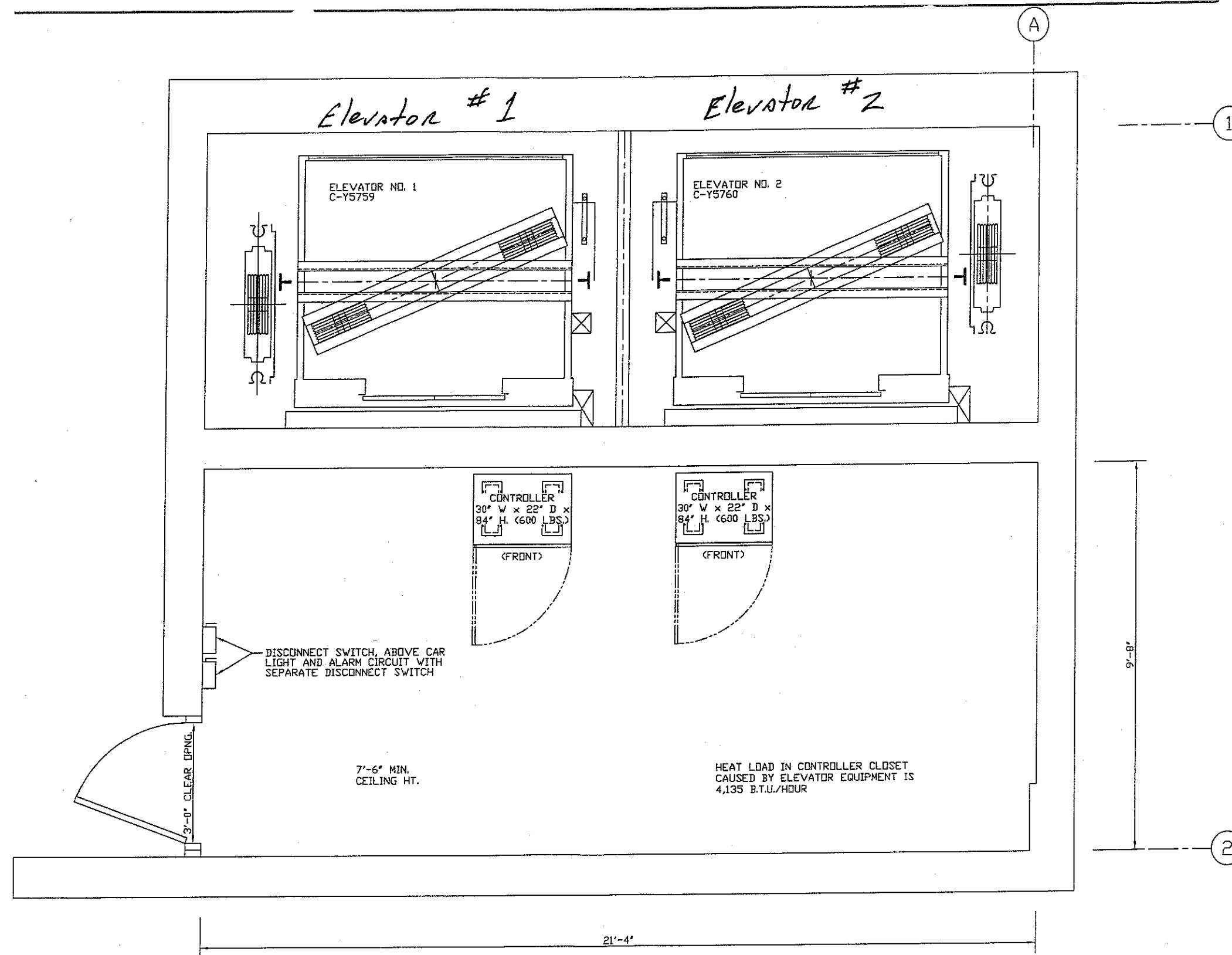
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DO NOT SCALE THIS DRAWING


ThyssenKrupp Elevator

GERMANTOWN, TN.

DRAWN	DATE	CHKD.	JOB NUMBER	REV.	SHEET NO.
RHL	05-20 2008		C-Y5759-60	A	3 OF 4



PLAN OF CONTROLLER CLOSET AT FLOOR 2
NORTHWEST ELEVATORS
ELEVATION 111'-4"

						FOR: BLOOMFIELD PARK BUILDING D	 ThyssenKrupp Elevator GERMANTOWN, TN.	DRAWN	DATE	CHKD.	JOB NUMBER	REV.	SHEET NO.
						THIS DRAWING AND ALL INFORMATION THEREON IS THE PROPRIETARY PROPERTY OF THYSSENKRUPP ELEVATOR AND MUST NOT BE MADE PUBLIC OR COPIED. THIS DRAWING IS LOANED SUBJECT TO RETURN ON DEMAND AND IS NOT TO BE USED, DIRECTLY OR INDIRECTLY, IN ANY WAY DETRIMENTAL TO THE INTEREST OF THYSSENKRUPP ELEVATOR.							
7/25/08	A	N.C.T.S.	RES			DO NOT SCALE THIS DRAWING	RHL	05-20 2008			C-Y5759-60	A	4 OF 4
DATE	SYM.	REVISION	BY	CHKD.									

Elevator # 3 # 4

MAX. BRACKET SPACING		CWT. INTERMEDIATE TIE BRACKET	
CAR	CWT.	SPACING	QTY.
16'-0"	16'-0"	> 12'-0"	1
		> 14'-0"	2

TRACTION ELEVATOR CONTRACT DATA

ELEVATOR NUMBER	3 & 4
TYPE	PASSENGER
CLASS	DESIGNED FOR CLASS "A" FREIGHT LOADING
CAPACITY	3,500 LBS.
MAXIMUM UNIT LOAD	875 LBS.
MAXIMUM AXLE LOAD	875 LBS.
MAXIMUM SUSTAINING LOAD	3,500 LBS.
SPEED	350 F.P.M.
OPERATION	TAC50-04
STOPS	8, IN LINE
HOISTWAY ENTRANCES	CENTER OPENING (PWD.)
CAR DOOR	CENTER OPENING (PWD.)
STILE	F6.5 x 6.05
CROSSHEAD	F10 x 132
SAFETY PLANK	F10 x 9.45
CAR GUIDE TYPE	ROLLER
CAR SAFETY	FLEX CLAMP
GOVERNOR	CAR
MACHINE	DAF270M W/ ROPE GRIPPER
DRIVE SHEAVE DIAMETER	17.32 INCH
ISOLATION	SPECIAL
FULL LOAD MASS	13,705 LBS.
CONTROL	VVVF
POWER SUPPLY	480 V. 3 PH. 60 CYC.
HOIST ROPE (PREFORMED)	(7) 10 mm - DRAKO 250-T 8 x 19 WARRINGTON - IWRC (230'-0" LONG EACH)
GOVERNOR ROPE (PREFORMED)	(1) 3/8 IN. 8 x 19 IRON (246'-0" LONG EACH)
CAR BUFFER TYPE	(1) OIL
CAR BUFFER STROKE	8 1/2 INCH
CWT. BUFFER TYPE	(1) OIL
CWT. BUFFER STROKE	8 1/2 INCH
CWT. STILE LENGTH	9'-0"
CWT. GUIDE TYPE	ROLLER
CWT. FILLER TYPE	(71) NO. 121455
TOTAL FILLER WEIGHT	5,112 LBS.
TOTAL CWT. WEIGHT (50 %)	5,727 LBS.
TOTAL CAR WEIGHT	3,934 LBS.
EST. CAB WEIGHT WITH DOOR OPERATOR CAB TYPE - (TKS)	1,720 LBS.
MACHINE WEIGHT	1,630 LBS.
CAR GUIDE RAILS	15 LBS./FT.
CWT. GUIDE RAILS	C12 (2)

THE FOLLOWING CONDITIONS MUST BE MET BEFORE INSTALLATION IS COMPLETED, AND ARE NOT INCLUDED IN THE ELEVATOR CONTRACT:

1. A PLUMB, PROPERLY-VENTILATED HOISTWAY (ACCORDING TO CODE AND SIZES SHOWN).
 2. ADEQUATE SUPPORT FOR MACHINE BEAMS, GUIDE RAIL BRACKETS, AND BUFFERS (FOR REACTIONS SHOWN).
 3. HOISTWAY BARRICADES (ALL CUTTING AND PATCHING TO INSTALL HOISTWAY ENTRANCES, SILLS, AND HALL FIXTURES).
 4. PIT LIGHTS AND SWITCH, CONVENIENCE OUTLETS OF THE GFCI TYPE PER NEC, PIT LADDER PER CAR (ACCORDING TO CODE). NOTE: MUST BE CLEAR OF ALL ELEVATOR EQUIPMENT.
 5. SEPARATE 120 VOLT, 15 AMP. BRANCH CIRCUITS, ALONG WITH TELEPHONE CIRCUIT WHEN REQUIRED, TO TERMINALS OF EACH REQUIRED CONTROLLER (AS LOCATED ON PLAN VIEW) FOR THE FOLLOWING:
 - CAR LIGHT AND ALARM CIRCUIT WITH RECEPTACLES OF THE GFCI TYPE PER NEC
 - GROUP CONTROL WHEN REQUIREDNOTE: IF STANDBY POWER IS SUPPLIED TO THE ELEVATOR, GROUP CONTROL CIRCUIT MUST BE STANDBY POWER BACKED.
 6. BRANCH CIRCUIT CONDUCTOR SIZING, MATERIALS, AND INSULATION (INCLUDING BRANCH CIRCUIT OVERCURRENT PROTECTIVE DEVICE) TO COMPLY WITH ALL LOCAL ELECTRICAL CODES (SEE "ELECTRICAL POWER REQUIREMENTS").
- NOTE: ALSO, A FOURTH WIRE OF SAME SIZE AS THREE PHASE WIRES IS REQUIRED FOR GROUNDING PURPOSES TO MINIMIZE ELECTRICAL NOISE INTERFERENCE. THE GROUNDING WIRE MUST BE CONNECTED TO THE BUILDING'S ELECTRICAL SYSTEMS GROUND.
- NOTE: IF STANDBY POWER IS REQUIRED, SEE "ELEVATOR STANDBY POWER OPERATION".
7. AN ENCLOSED CONTROLLER ROOM AREA (ACCORDING TO CODE), WITH ADEQUATE LIGHT, HEAT, VENTILATION (MIN. 50' F., MAX. 90' F. WITH NON-CONDENSING HUMIDITY OF 10-90%), AND SEALED CONCRETE FLOOR SLAB SURFACE.
- NOTE: MUST PROVIDE ADEQUATE DOOR SIZE TO ALLOW INSTALLATION OF EQUIPMENT - OR LEAVE WALL OUT UNTIL EQUIPMENT IS IN PLACE.
- NOTE: MACHINE BEAM DESIGN (PER ASME A17.1).
8. ENTRANCE DRYWALLS WITH LINTELS, MUST BE PROVIDED AFTER ENTRANCE FRAMES ARE SET - OR LEAVE A ROUGH OPENING 1'-3" WIDER AND 1'-3" HIGHER THAN THE FRAME OPENING; FOLLOW INSTALLATION PROCEDURES FOR FRAME TO WALL INTERFACE TO MAINTAIN LABELED CONSTRUCTION. FILL IN AROUND FRAMES AFTER THE FRAMES ARE SET.
9. POCKETS IN CORRIDOR WALL (PER FIXTURE DRAWINGS) FOR HALL FIXTURES.
- NOTE: MUST BE LOCATED AS DIRECTED BY ELEVATOR CONTRACTOR.
10. SMOKE SENSORS (AS REQUIRED).
11. CONDUIT AND WIRING FROM HOISTWAY TO ELEVATOR MONITORING PANELS (FOR SECURITY, LIFE SAFETY, OR FIRE REQUIREMENTS).

RAIL FORCES		F ₁	F ₂
	LOADING OR UNLOADING	455 LBS.	320 LBS.
	CAR	7,580 LBS.	
MAXIMUM VERTICAL FORCE ON EACH GUIDE RAIL DUE TO SAFETY APPLICATION.			

NOTE A: ALL REACTIONS INCLUDE ALLOWANCE FOR IMPACT.

NOTE B: THYSSENKRUPP ELEVATOR TO BE NOTIFIED OF ANY CHANGE TO ELEVATOR HOISTWAY OR MACHINE ROOM DESIGN PRIOR TO FABRICATION OF ELEVATOR EQUIPMENT.

NOTE C: ELEVATOR DESIGN AND FABRICATION BASED ON ESTIMATED CAB WEIGHT SHOWN. LAYOUT APPROVAL WILL BE CONSTRUED AS FINAL CAB WEIGHT, UNLESS OTHERWISE NOTIFIED.

08/01/08	(A)	ROUGH OPENING NOTE	RHL	
DATE	SYM.	REVISION	BY	CHKD.

DO NOT SCALE THIS DRAWING

ELEVATOR CONTRACTOR	CONTRACT NUMBER
THYSSENKRUPP ELEVATOR COMPANY	C-Y5761-62
DETROIT, MICHIGAN	
FOR: BLOOMFIELD PARK BUILDING D	

ADDRESS: 1939 TELEGRAPH ROAD

CITY: BLOOMFIELD HILLS, MI 48304

ARCHITECT:

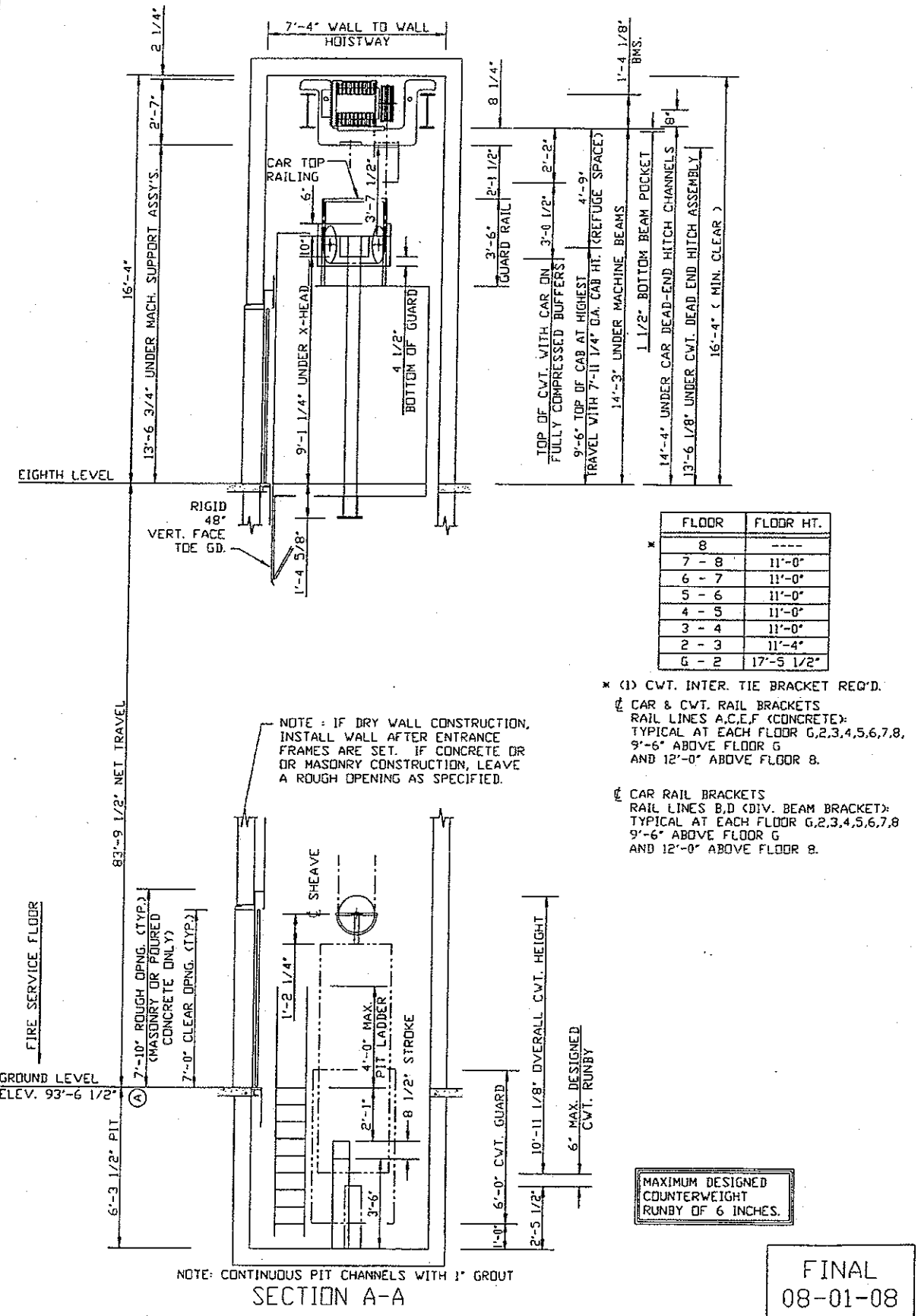
GENERAL CONTRACTOR: CLARK CONSTRUCTION

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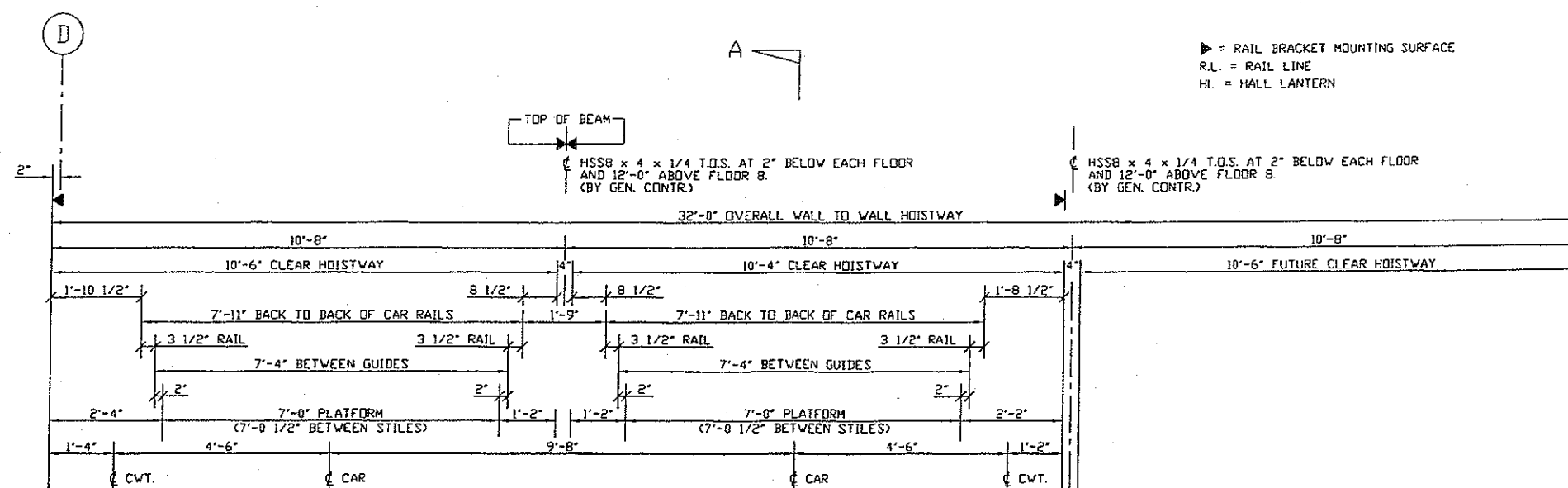


GERMANTOWN, TN.

DRAWN	DATE	CHKD.	JOB NUMBER	REV.	SHEET NO.
RHL	05-20 2008		C-Y5761-62	A	1 of 4

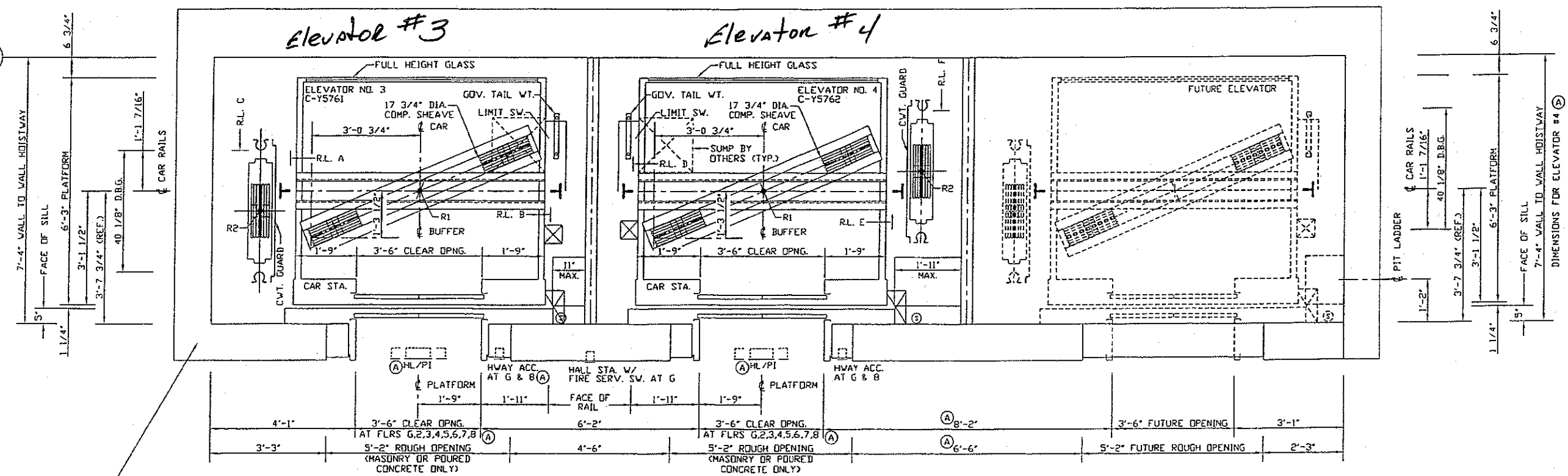


Elevator #3 & #4



SYNERGY H FAST-TRAC WEIGHTS	
SLING WEIGHT (SYNERGY H-100 ASSEMBLY, STILES, SAFETY DEVICE, SAFETY CHANNELS & GUIDES)	1,605 LBS.
MISCELLANEOUS WEIGHT (HOIST MOTOR, SAFETY CANOPY & TEMPORARY PLATFORM)	200 LBS.
TOTAL FAST-TRAC SUSPENDED LOAD	1,805 LBS.

SYNERGY H CONSTRUCTION WEIGHTS	
SLING WEIGHT (SYNERGY H-100 ASSEMBLY, STILES, SAFETY DEVICE, SAFETY CHANNELS & GUIDES)	1,605 LBS.
FACTORY PLATFORM (INCLUDES BRACE RODS)	342 LBS.
MISCELLANEOUS (MECHANICAL HELPERS, TOOLS & EQUIPMENT)	1,000 LBS.
TOTAL TEMPORARY CWT. WT. REQUIRED	2,947 LBS.
CWT. FRAME WEIGHT (FRAME, SHOES, SHIMMERS, SHAVE, SAFETY, ETC.)	615 LBS.
TEMPORARY FILLER WT.	2,332 LBS.
TEMPORARY FILLER QTY	32



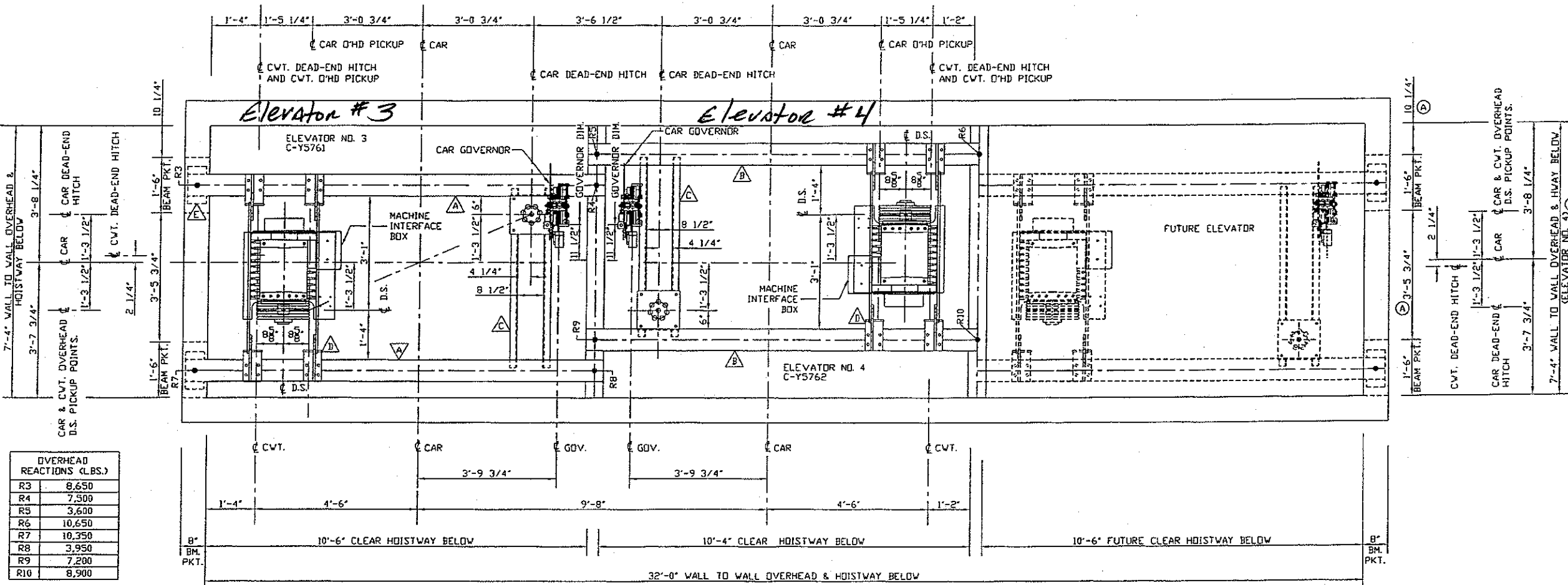
NOTE: IF DRYWALL CONSTRUCTION, INSTALL WALL AFTER
ENTRANCE FRAMES ARE SET. IF CONCRETE OR MASONRY
CONSTRUCTION, LEAVE ROUGH OPENING AS SPECIFIED.

BUFFER REACTIONS	
R1	32,200 LBS.
R2	24,950 LBS.

PLAN OF HOISTWAY SOUTHWEST ELEVATORS

FINAL
08-01-08

FOR: BLOOMFIELD PARK BUILDING D				ThyssenKrupp Elevator			
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08/01/08	(A)	ADD COMBO HL/PI AT EACH FLOOR	RHL	DRAWN	DATE	CHKD.	JOB NUMBER
DATE	SYM.	REVISION	BY	CHKD.			
DO NOT SCALE THIS DRAWING				RHL	05-20 2008		C-Y5761-62
							REV. SHEET NO.
							A 2 of 4



FINAL
08-01-08

08/01/08	(A)	SUPPORT BEAMS, FUTURE MACHINE LOCATION	RHL	
DATE	SYM.	REVISION	BY	CHKD.

FOR: BLOOMFIELD PARK BUILDING D

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ThyssenKrupp Elevator

GERMANTOWN, TN.

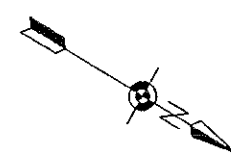
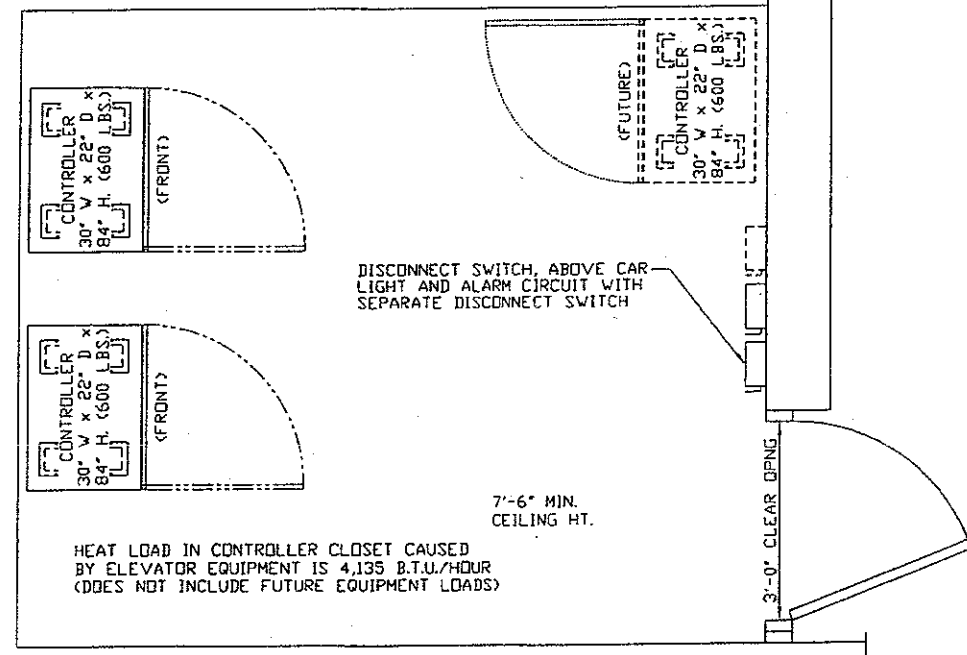
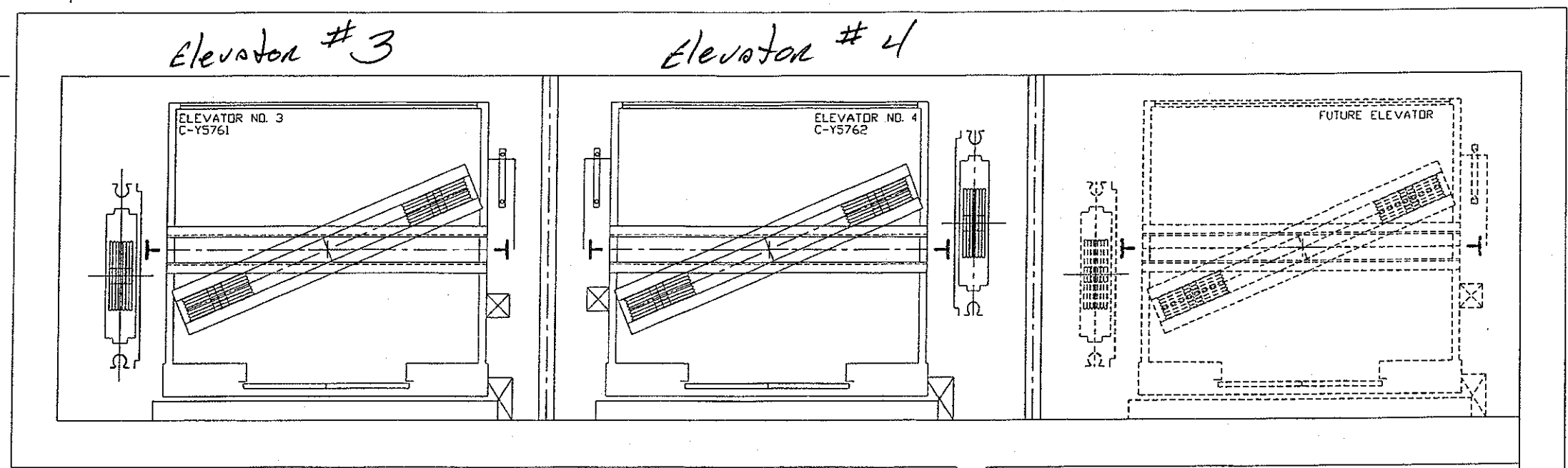
DRAWN	DATE	CHKD.	JOB NUMBER	REV.	SHEET NO.
RHL	05-20 2008		C-Y5761-62	A	3 of 4

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Elevator #3

Elevator #4



PLAN OF CONTROLLER CLOSET AT "INTERMEDIATE LEVEL"
SOUTHWEST ELEVATORS
ELEVATION 102'-7"

FINAL
08-01-08

						FOR: BLOOMFIELD PARK BUILDING D	 ThyssenKrupp Elevator GERMANTOWN, TN.						
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08/01/08	(A)	FUTURE CAR SETUP	RHL			DO NOT SCALE THIS DRAWING		RHL	05-20 2008	-	C-Y5761-62	A	4 OF 4
DATE	SYM.	REVISION	BY	CHKD.									